OCT 3 1944

JOURNAL
of the
Association of American Medical Colleges

Volume 19 SEPTEMBER, 1944 Number 5

CONTENTS

Reports on Tropical Medicine Fellowships Served in Central America. *William O. Russell, Henry E. Wilson, L. B. Woolner, Herbert G. Johnstone* and *W. McD. Hammon* 257

The Medical Science Center of Wayne University. *Edgar H. Norris* 272

Anatomy in Medical Education. *Donald Mainland* 288

Liaison Psychiatry and the Pediatric Outpatient Department. *Reynold A. Jensen* and *John M. Adams* 298

Program for the Fifty-fifth Annual Meeting 303

Opening Dates of 1945 Sessions of Medical Schools of the United States 305

Editorials 307

College News 309

General News 315

Book News 319

CHRISTOPHER'S
Textbook of Surgery

Used in More Medical Schools Than Any Other

See SAUNDERS ANNOUNCEMENT—*just inside*

ASSOCIATION OF AMERICAN MEDICAL COLLEGES

OFFICERS FOR 1943-1944

President: E. M. MacEwen, State University of Iowa
President-Elect: A. C. Furstenberg, University of Michigan
Vice-President: Philip A. Shaffer, Washington University
Secretary: Fred C. Zapffe, Chicago
Treasurer: A. C. Bachmeyer, University of Chicago

Executive Council

Willard C. Rappleye (Columbia), Chairman; E. M. MacEwen (Iowa)
A. C. Furstenberg (Michigan); Loren R. Chandler (Stanford)
Maurice H. Rees (Colorado); Russell H. Oppenheimer (Emory)
W. S. Leathers (Vanderbilt); Philip A. Shaffer (Washington)

MEMBERS

Alabama

University of Alabama, School of Medicine, University.

Arkansas

University of Arkansas School of Medicine, Little Rock.

California

College of Medical Evangelists, Loma Linda and Los Angeles.
Stanford University School of Medicine, San Francisco and Stanford University.
University of California Medical School, San Francisco and Berkeley.
University of Southern California School of Medicine, Los Angeles.

Canada

Dalhousie University Faculty of Medicine, Halifax, N. S.
McGill University Faculty of Medicine, Montreal.
Queen's University Faculty of Medicine, Kingston.
University of Alberta Faculty of Medicine, Edmonton.
University of Manitoba Faculty of Medicine, Winnipeg.
University of Toronto Faculty of Medicine, Toronto.
University of Western Ontario Medical School, London.

Colorado

University of Colorado School of Medicine, Denver.

Connecticut

Yale University School of Medicine, New Haven.

District of Columbia

George Washington University School of Medicine, Washington.
Georgetown University School of Medicine, Washington.
Howard University College of Medicine, Washington.

Georgia

Emory University School of Medicine, Atlanta.
University of Georgia School of Medicine, Augusta.

Illinois

Loyola University School of Medicine, Chicago.
Northwestern University Medical School, Chicago.
University of Chicago Medical Schools, Chicago.
University of Illinois College of Medicine, Chicago.

Indiana

Indiana University School of Medicine, Bloomington and Indianapolis.

Iowa

State University of Iowa College of Medicine, Iowa City.

Kansas

University of Kansas School of Medicine, Lawrence and Rosedale.

Kentucky

University of Louisville School of Medicine, Louisville.

Louisiana

Louisiana State University School of Medicine, New Orleans.
Tulane University of Louisiana School of Medicine, New Orleans.

Maryland

Johns Hopkins University School of Medicine, Baltimore.
University of Maryland School of Medicine, Baltimore.

Continued on Third Cover Page

Published bimonthly, January, March, May, July, September and November, at 5 South Wabash Avenue, Chicago 3, Illinois, by the Association of American Medical Colleges. Subscription price $3.00 per year. Single copies, 75 cents.

Entered as second class matter January 17, 1930, at the Post Office at Chicago, Illinois, under the Act of March 3, 1879.

(Continuing the Bulletin of the Association of American Medical Colleges)

JOURNAL
OF THE
Association *of* American Medical Colleges

Volume 19 SEPTEMBER, 1944 Number 5

Reports on Tropical Medicine Fellowships Served in Central America*

I

WILLIAM O. RUSSELL
Assistant Professor in Pathology, Washington University
School of Medicine
St. Louis, Missouri

The two weeks we spent in San Jose, Costa Rica, at the San Juan de Dios Hospital, afforded us the best opportunity of our entire trip to observe a large number of the exotic diseases treated and cared for in a well managed hospital. Dr. Peña was most cooperative and helpful. His ward rounds each morning were well conducted and I was impressed with his scholarly attitude and good fundamental concepts of disease.

Being a pathologist, I was greatly interested in the pathological laboratory, under the direction of Dr. Fallas. The necropsies were well done, and the clinical men, particularly Dr. Peña, were keenly interested in following their cases to the necropsy table. Although at the time our group was assigned to the hospital the necropsy service was unusually light, I did have good opportunity to see and do some interesting work. Dr. Fallas is delighted if the visiting doctors wish to perform some of the necropsies. While necropsy cases are studied carefully as regards gross pathological changes, histological studies of the cases were performed infrequently. Dr. Fallas is aware of this inadequacy and has plans to expand his tissue laboratory so as to provide adequate histological work. We were given the most cordial consideration and assistance by Dr. Fallas and all his technical assistants. The exotic diseases we had opportunity to see at the San Juan de Dios Hospital included many cases of cutaneous leishmaniasis, a case of yaws (a most unusual and rare disease at the San Juan de Dios Hospital) amebiasis, with its many complications, human myiasis from *Dermatobia hominis* and the intestinal parasites in every stage and degree of infestation, malnutrition as a grave and serious problem and the problem of skin ulcerations in tropical countries.

Through the cooperation of Dr. Glusker, a trip was arranged for us to visit Porte Limon. At Limon we were most graciously treated and cared for by Dr.

* A grant received from the John and Mary R. Markle Foundation made it possible to send members of the faculties of medical schools of the United States and Canada to Central America for one month, thus giving opportunity to see tropical diseases where they are common and to become familiar with methods of treatment employed. It is deemed of value and interesting to have an opportunity to know what the reactions were of the men who went to Central America. This is a continuation of the plan under which men were sent to the Army Medical School and to Tulane University of Louisiana School of Medicine. Space and other wartime limitations forbid publishing more than a few of the reports received.

Pacheco, who is in charge of the United Fruit Company Hospital there. The only disease we saw at Limon, however, that we had not previously seen, was filariasis. We were fortunate in seeing several cases with positive blood smears and one case of clinical elephantiasis. Although this disease has not yet assumed serious proportions in this part of Costa Rica, as judged from the number of cases with manifest elephantiasis, Dr. Pacheco was disturbed by the large number of cases with microfilaria that his laboratory found during routine blood and urine studies. It was interesting to observe at Limon the many difficulties that are encountered in running a laboratory in an extremely hot and humid climate. For example, blood smears that are left for a few days soon become coated with a thin layer of mold. Many other problems arise from the fact that the place never dries out completely.

While at San Jose, we were fortunate to be included on the trip to Punta Arrenas that Dr. Glusker made one Sunday in a trimotor Ford plane to visit three of the health centers in that area that were being built and sponsored by his office. On this trip we visited Nicoya, Santa Cruz and Las Juntas. These were the most primitive types of native villages that I have ever seen. All of these towns were at low elevations and had extremely hot and humid climates. Malaria, of course, was the principal problem.

Our stay for one week at Tiquisate, Guatemala, was most delightful. The United Fruit Company Hospital provided unusual opportunity to observe the manner in which medical problems are handled in tropical countries because Tiquisate, in contrast to San Jose, has a truly tropical climate having an elevation under 1,000 feet. All the doctors at the hospital were most cordial and gave their time liberally to us. Tiquisate lacks the variety of exotic diseases that we saw at the San Juan de Dios Hospital in San Jose. It does provide excellent opportunity to observe malaria in a large native population as it is being handled by a large American Company (United Fruit) interested in improving the health and physical well being of the people in order that they may be more efficient and better workmen. While we had opportunity to observe malaria in its various manifestations in the other places we visited, the general problem was not so clearly manifest as in Tiquisate.

It was the universal opinion of our group that the program Dr. Vought had arranged for us in Guatemala City was the best since it provided us with opportunity to see such a variety of things in so short a time. We were able to see a new outbreak of typhus and all the measures used by the Health Department to combat the outbreak. Our trip to Yepocapa to observe onchocerciasis was extremely interesting.

I enjoyed visiting the Sanidad Publica in Guatemala City and was amazed to see the available laboratory equipment which included an electron microscope.

In Guatemala City each of us was asked to present a short paper before a meeting of the local doctors and members of the Health Department. An interpreter translated our sentences into Spanish one by one. The Guatemalan doctors seemed to appreciate hearing at first hand of work being done in the United States on parasitic and protozoal diseases. I would like to suggest, however, that

if this program is continued, that the members of the groups be told of the possibility of being asked to present original work, and that a few lantern slides to illustrate points would be of great assistance in presenting material to an audience that understands little English.

I returned to the United States via Mexico and Brownsville, Texas, stopping off a few days in Mexico City. In Mexico City, I had the pleasure of spending a day with Dr. Castañeda at his typhus laboratory in the Hospital General. I enjoyed hearing Dr. Casteñeda discuss the general problem of typhus in Mexico and Central America. The following day I spent at the Institute de Salubridad y Enfermedades Tropicales where I met Dr. Jose Zozaya, Dr. Bustamente, Dr. Varela and others. I was greatly interested to hear of the more important medical problems that they had in Mexico. I was particularly interested in pinta because although not a fatal or serious disease it makes its victim virtually a social outcast and causes the worst type of social degradation.

I am delighted that the itinerary of our group called for us to visit several places in Central America rather than spending all of our time at one or possibly two places. I do not mean to say that I could not have profitably spent the time in one place, as for example, in Tiquisate or San Jose, but it was my experience that the law of diminishing returns begins to operate after you are at one place five or six days. In that time it usually is possible to see all the diseases in that locality and their particular problems. Certainly, more time could be used in the study of different problems at a given place but it seemed to me better to see more diseases rather than to concentrate on a few. For example, the San Juan de Dios Hospital in San Jose provided opportunity for us to see many diseases that we did not see in other places. At Limon we saw filariasis *(Wuchereria bancrofti)* and at Tiquisate we saw a case of pinta and the malaria problem was particularly well visualized.

It was particularly revealing to me to learn from first hand observations that there are yet unsolved problems concerning many of the so-called tropical diseases that are usually presented in textbooks with great finality. To mention only two that we encountered: there are many questions about the method of transmission of cutaneous leishmaniasis and onchocerciasis that are far from being understood completely, yet textbooks give the impression that it is all worked out. I feel that the trip gave me an unusual opportunity to gain a background for the better understanding and individual interpretation of tropical medicine. This is something that cannot be gained from a textbook or academic exercise. I believe that the greatest part of this background is the realization and understanding of the social conditions and racial problems that exist in the warmer parts of the earth on which so many of the so-called tropical diseases are dependent for their perpetuation. For this reason, I am happy that we were given the opportunity to be in Tiquisate where the climate is truly tropical. San Jose does not have the heat, humidity and tropical atmosphere that Tiquisate or Limon have. This again exemplifies the point I have previously made, that I believe it more advantageous to be in several places rather than spend all of the time in one or two locations.

II

HENRY E. WILSON
Ohio State University College of Medicine
Columbus, Ohio

I left Brownsville, Texas, August 31, as planned, and after a pleasant and uneventful trip arrived in San Jose, Costa Rica, September 1. Mr. Gronblad of the United Fruit Company was very helpful in giving information regarding the medical facilities in San Jose in the United Fruit Company hospitals, and the situation then existant in connection with the Institute of Inter-American Affairs office in San Jose. After visiting the O.C.I.A.A., I began making requests for arrangements to make the field trip in Guatemala rather than elsewhere.

The day after arrival in San Jose, Dr. Francis Lawler and I went to the Hospital San Juan de Dios and made rounds with Dr. A. Peña Chavarria. We spent the afternoon with Dr. M. Fallas, the pathologist. I was greatly impressed by the quantity and variety of clinical material, by Dr. Peña's clinical acumen, experience and willingness to teach, and by Dr. Fallas' ability and generosity of his time and pains in demonstrating material. We spent the remainder of the week at this hospital making rounds with Dr. Peña in the morning, studying smears, stools and tissues in the pathological and clinical pathological laboratories in the afternoons. At this time I tentatively planned to return to San Jose from Limon a little earlier than had been originally planned, and this we did.

This hospital has 1,400 beds of which about 600 are medical. However, more than one-half of the medical beds contain two patients, so the census is higher than one might ordinarily expect. There is a great deal of cutaneous Leishmaniasis; numerous "textbook pictures" of "ulcers de los chicleros," and mixed ulcerative and lymphatic types. There were several beautiful examples of the mucocutaneous form. These cases were interesting in themselves, but were especially valuable here since we could compare them with syphilitic eruptions and ulcers, mycotic skin lesions, etc., on the same ward. There were a number of interesting mycoses; one beautiful case of chromoblastomycosis, the biopsy of which we studied. It was interesting, and to me surprising, to see a number of cases of erythema nodosum and to listen to several typical rheumatic hearts. Dr. Peña did not know the figures, but rheumatic fever is far from rare in Costa Rica.

Nutritional deficiencies of various kinds and degrees of severity were represented prominently on both the medical and pediatric services. Of particular interest to me were several cases (the youngest patient was 7 years of age) of hepatic cirrhosis, presumably on the basis of vitamin, or at least, nutritional deficiency. I was interested in the rarity of anemia (not only E.M.F. deficiency types of anemia but, indeed, any kind) in these cases although leucopenia was always present with appreciable splenomegaly. There were several cases of elephantiasis of the lower extremities. In Dr. Peña's experience venous thrombrosis, on the basis of ankylostomiasis, is the commonest cause of elephantiasis here. There were vast numbers of cases of malaria, amebic and bacillary dysentery;

many interesting respiratory infections, ranging from typical and atypical pneumonias to lung abscess. It was interesting that bacterial, especially pneumococcal pneumonias, are mild and with low mortality (even before the use of sulfonamides), but influenza is severe with high mortality.

Much of the benefit and pleasure derived from the time spent in this hospital was due to the effort and time devoted by Dr. Peña Chavarria and Dr. Fallas in demonstrating the material present and in discussing it at length. Dr. Peña impressed me as being a first class clinician. He compares very favorably with the best men, American or otherwise, whom I have met.

During the visit here I made some detailed plans for obtaining some tissue blocks for microscopic section. Dr. D. S. Glusker of the O.C.I.A.A. was told about this later, and was anxious for us to arrange to have the material sent to him first, to be sent on to Dr. Yeager and distributed subsequently. This we agreed to do and we made this arrangement with Dr. Fallas.

During our last afternoon in Costa Rica, Dr. Fallas took Dr. F. C. Lawler and me for a ride in the mountains and a visit to the Tuberculosis Sanatorium. Here we spent a very profitable three hours going through the institution and having what amounted to a symposium on the clinical and public health aspects of tuberculosis with Dr. Blanco, physician-in-chief of that institution.

On September 5, I entrained for Limon, Costa Rica, and stayed there until September 22. The type of medical practice here was necessarily quite different from that which we had seen in San Jose. The turnover is quite rapid and the chance to investigate and follow cases is limited by the necessity of discharging patients to their field dispensary as soon as they are ambulatory.

During my visit of 17 days at the Limon Hospital I observed a turnover of 114 clinical cases. The following discharge diagnoses of these 114 cases gives a rough impression of the general type of pathology which was observed on the wards:

	Cases
Malaria	30
Pl. Falciparum 24 — E.A. Gametes only	44
Pl. Falciparum 24 — E.A. Rings only	17
Pl. Falciparum 24 — E.A. Rings and gametes	3
Pl. Vivax 6	
Respiratory infections	15
Surgical (traumatic and otherwise)	15
Obstetrical and gynecological	10
Rheumatism and arthritis (including G. C.)	7
Tropical ulcers, varicose ulcers, undiagnosed skin eruptions	6
Amebiasis (proved and "clinical")	4
"Acute enteritis" (Many of these cases were undoubtedly bacillary dysentery)	8
A heterogeneous mixture of cases: "nervousness," dental problems, etc.	19

A review of the medical superintendent's reports of the past several years revealed a percentage distribution in the various categories very similar to the above. Allusion has been made to the rapid turnover and obvious difficulty in making a more precise diagnosis in many of these cases.

A number of other cases (private patients) were seen in consultation at the request of Dr. Pacheco. Two of these were atypical pneumonia. Dr. Pacheco now believes that they have been seeing a large number of these cases and signing them out as influenza. Unfortunately, an X-ray apparatus or fluoroscope were not available for a more extensive investigation of the large number of cases of respiratory disease which were on the wards.

One full day was spent on a field trip with Dr. Pacheco and Mr. MacReady, the sanitary engineer. We visited Good Hope (25 miles from Limon) and Monteverde, two of the large Abaca plantations. I came away with a good idea of problems of terrain, water level, sanitation, the intelligence level of the workers and difficulties in obtaining building materials. These, at present, are the important factors in malaria control.

The time spent at Limon was very pleasant. The food was wonderful and swimming was fine. Dr. Pacheco and his staff, Miss Mallan, the nursing supervisor, and the entire personnel, from nurses to patients, made every effort to be helpful and hospitable.

On September 22, I returned to San Jose and, as previously related, spent the most of the next four days at Hopital San Juan de Dios.

On September 24, Dr. Francis Lawler and I spent a pleasant half-day at the Leprosarium, a trip arranged by Dr. David Glusker of the O.C.I.A.A.

On September 26, Dr. Lawler and I went to Guatemala City where we joined Drs. Slavin, Wilhelmi and Shaw for the field trip. Drs. Vought and Campbell had arranged a superb program. On Monday, September 27, we met many of the leading physicians and public health authorities at a luncheon given by the O.C.I.A.A., and thereafter heard much about form and function of the Institute of Inter-American Affairs. On the following day, our party of five visited all of the civilian hospitals, the military hospital, nursery and leprosarium. On September 29, we went to Pelin where a number of cases of onchoceriasis had been assembled for examination and for excision of nodules. A microscope had been carried all the way for our use in studying the microfilariae. The demonstration of cases and of the organisms was done beautifully. Some good photos were obtained.

Much could be written about the last three days in Guatemala. Our party made a tour which took in Quetzaltenango, Chichicastenango and surrounding small villages in that vicinity for the purpose of seeing some cases of typhus and the conditions under which it occurs. Including convalescents, we saw a total of 14 cases. Only two of these showed a marked rash. One case, of only 4 days' duration, with a very early rash, showed a very rapid heart rate, tic-tac rhythm and a pericardial friction rub, although at first glance he did not appear to be very ill. I had carried my stethoscope all the way with the idea of looking for these things in such cases; finding it in just one case made the whole day worth while.

Generally speaking, the week spent in Guatemala was the high point of the trip. From a medical point of view onchocerciasis and typhus were the chief attractions and the only entities here which we had not seen in Costa Rica. I felt that it was worth a week if we had not seen anything but this classical typhus. It goes without saying that the scenic attractions of Guatemala were a greatly appreciated addition to the purely medical aspects of the trip.

III

L. B. WOOLNER
Department of Pathology, Dalhousie University
Halifax, N. S., Canada

The two weeks spent at the San Juan de Dios Hospital in San José, Costa Rica, proved very agreeable and profitable from a medical standpoint. Dr. Peña, the superintendent, and the other clinicians we met were most helpful and cordial. The daily routine included ward rounds each morning, with the afternoons spent largely in the laboratory, studying post mortem material (of which there was an ample supply), examining slides and collecting useful material for teaching. The hospital housed about 1,600 patients (25,000 admissions per year) and provided us with a greater variety of cases than any other single area visited.

Many cases of cutaneous leishmaniasis were available for observation and study, and we were in contact with the patient a sufficiently long period to see some improvement under treatment as judged by the number of *Leishmania* seen in stained slides made from the skin. Dr. Peña was at the time experimenting with the use of atabrine in treatment. We obtained many good slides for teaching purposes as well as pictures of the lesions.

The San José area is very suitable for the study of *Amoebiasis*. A very large proportion of routine stool examinations are positive for *E. histolytica* trophozoites or cysts (said by the laboratory technicians to be 40 per cent positive). In a single day in the hospital we saw three cases of liver abscess, with operation and drainage in one case as well as two postmortem examinations on liver abscess deaths. The percentage of positive stools in the population and the amount of clinical amoebiasis in the hospital made us especially careful to avoid uncooked vegetables or salads while in San José.

Two or three wards are devoted entirely to cases of so-called tropical ulcer, a lesion which has apparently been causing considerable trouble among our troops in the Pacific area. In San José these cases were being treated with bed rest, improved nutrition and neoarsphenamine, while at Quirigua, in Guatemala, a new method was being tried, namely, 5 per cent zinc chloride followed in a few days by hypertonic saline solution. Bed rest and improved nutrition seem an essential part of the therapy.

Both in Costa Rica and Guatemala we saw many cases of extreme malnutrition among the very poor. Although many manifestations were in evidence,

the most striking picture was that of a generalized edema—comparable to the severe nephrotic syndrome which we occasionally see in this area. The quality of protein in the staple diet (black beans and tortillas) is apparently very poor. One patient gave a history of having had no meat in his diet for 22 years! One is impressed here, as elsewhere, by the necessity of attacking the economic problem which gives rise to such pitiful cases.

Other clinics at the San Juan included cases of blastomycosis and chromoblastomycosis with laboratory findings and one case of yaws was in the hospital during our visit. We were interested in the outdoor clinic on cutaneous myiasis and secured some specimens of larvae from the skin which we expressed ourselves. The number of intestinal parasites in this area is simply amazing. Routine examination of stools reveals 90 per cent of all cases admitted positive for protozoa or helminth ova. These include hookworm, ascaris, E. histolytica, Strongyloides, Balantidium coli, Giardia Lamblia, and there is a saying that "every good Costa Rican has whipworms." Several interesting post mortems showed us the extreme fatty changes and appearance of the organs in fatal hookworm disease.

We accompanied Dr. Glusker, O.C.I.A.A., San José, on a trip by air to the Province of Guanacaste, visiting several newly established Health Centers. Another day was spent at Limon on the Caribbean where we observed cases of elephantiasis and secured many blood films of *Wuchereria bancrofti*. This short visit to Limon was considered very profitable by all the members of the party.

QUIRIGUA, GUATEMALA

Although many cases of malaria were available for study at the San Juan de Dios Hospital, it was at Quirigua, Guatemala, that the ravages of the disease could best be appreciated. In the Quirigua Hospital and in the huge banana plantations of the unhealthy Motagua Valley one came into intimate contact with every phase of malaria control work—including the necessity of sleeping behind screens or under bed nets.

In the 200 bed hospital, the great majority of cases admitted consisted of young adults (plantation workers) and children with clinical malaria. Thus, although the period spent in the hospital was not long, it was sufficient to observe a large number of cases, to study the clinical picture in all its variations, as well as to follow the progress of the patient under treatment.

Secondly, in this region one had ample opportunity to appreciate the problems of malaria control. Routine blood surveys of the plantation workers were being conducted at the time of my visit and this provided an interesting item of field work in which I joined. As many as 500 blood smears would be made in a single morning and the parasitic index for this particular plantation determined. At present, in most areas in this region, the index is below 10 per cent, contrasting favorably with a 40 to 60 per cent index often found in the past. All those with positive blood are given a course of atabrine and plasmoquine.

Interesting antilarval measures were observed at Bananera, the headquarters of the United Fruit Company, where several large pools in the village are

stocked with *Gambusia*. Not a single larva could be found around the edges. In other areas, use of Paris green, oiling and drainage were demonstrated, although in some regions the latter is impossible since the level of the ground is lower than that of the river in the wet season.

The problem of malaria control in this huge valley is a difficult one. The Motagua river runs its entire length providing an excellent breeding ground for mosquitoes. The rate of infection among the native population is very high. Puerto Barrios, at the mouth of the river, on the Caribbean, had, in 1929, a spleen rate of 81 per cent with a correspondingly high parasitic index.

The time spent at Quirigua was a real lesson in malaria—clinical, field work and mosquito control. I cannot speak too highly of the kindness and cooperation of Dr. N. D. MacPhail, Superintendent of Quirigua Hospital. Dr. MacPhail has lived and worked in this valley since 1907, and can tell many interesting stories of the years when conditions were, if anything, as bad as those which existed in the Canal Zone.

GUATEMALA CITY

The week spent in Guatemala City was very well organized by Dr. Robert Vought, O.C.I.A.A. On each day a trip was made into the interior to observe different diseases. These included a visit to the Leprosarium and to the port of San José where the Health and Sanitation division of the O.C.I.A.A. has been carrying out extensive malaria control work.

We were all intensely interested in the trip to San Martin where an emergency typhus hospital has been constructed. After being carefully sprayed to guard against louse infestation, we entered the building and examined the patients, all Indians, some severely ill, others convalescent. The hospital mortality rate in this region is at least 10 per cent, while in unattended cases the figure is from 30 to 50 per cent. Observation of the delousing of contacts in the native village nearby was another feature of the day's activities. In this large endemic area of louse borne typhus, the present methods of control consist of (1) isolation of patients; (2) delousing of immediate family and contacts. No extensive use has been made of vaccines.

In Yepocapa, a coffee growing area, of about 3,000 feet elevation, we had opportunity to examine cases of onchocerciasis. Dr. Dias, who has worked at this problem for many years, conducted a "surgical clinic" in our presence and we watched the removal of the nodules and secured some interesting material for teaching.

Our final day in Guatemala City included a round table discussion on tropical diseases at a gathering of local physicians, at which time we presented short papers on subjects of common interest. The Public Health facilities in the city, including the new "Sanidad Publica," were inspected.

It was the opinion of all members of the group that this final week of the course was conducted very well and especially valuable. To stress a single feature, the contact with louse borne typhus, a disease so linked in the past with war, famine and human suffering, was to all of us a memorable experience.

Since the course was of such obvious value, and opportunity for observation and study of so many and varied diseases provided, I find it difficult to suggest recommendations or alterations. I feel that a week at Quirigua is of great value in gaining an appreciation of the malaria problem in all its aspects. To be set down in a highly malarious region, to participate in the actual field work and to intern in a hospital which admits almost 100 per cent of clinical malaria cases, gives me an interest in the problem which will last a life time.

I feel that the program as a whole is to be heartily recommended, and those in charge congratulated on the efficiency and conscientiousness with which it is being carried out. Taking the long view one cannot even guess what good may come to many millions of people as a result of this new interest in the problems of tropical regions.

IV

HERBERT G. JOHNSTONE
Assistant Professor of Bacteriology
University of California Medical School
San Francisco, California

This report covers activities engaged in and observations made during my recent stay in Honduras and Guatemala. Dr. Charles F. Branch of Boston University was my partner during the trip. For a period of about three weeks we were in residence at the Tela R. R. Company Hospital at Tela, Honduras. Upon leaving the hospital, a two day tour was made through the United Fruit Company's extensive banana plantations in the region of La Lima, El Progreso and San Pedro Sula. Stopovers were made at Tegucigalpa both on the way to and from the North Coast. The final week of the trip was spent in Guatemala City and in the highlands to the west of the city. On the flight down, due to bad flying condtions, we were able to spend a most interesting day in San Salvador.

TEGUCIGALPA

Several visits were made to the offices of the Servicio Coöperativo Interamericano de Salud Pública (S.C.I.S.P.). Discussions were had with Dr. Frank I. Tullis, Chief of Party, and other members of the staff relative to the program of the Servicio. The organization of the S.C.I.S.P., relationships with the local health authorities, health conditions in Honduras and projects completed or underway were considered.

Inspection was made of the new water supply and purification system being constructed for the town of Comayagüela. This is one of the projects undertaken by the S.C.I.S.P. We also inspected the new Health Center—another S.C.I.S.P. project. When completed, this center will be the first established in Honduras and will supply much needed public health laboratories and facilities for the training of laboratory technicians.

During a visit to the medical school, we met several of the faculty members and attended some of the classes in session. It was difficult to realize how an

adequate medical training could be obtained solely by lectures and with the almost complete lack of laboratory facilities.

We visited the Hospital San Felipe with Dr. Vidal as guide (one of the local physicians associated with the S.C.I.S.P.).

Dr. Roy B. Nutter, an American physician who has been in Latin America for a long time, has established an excellent hospital and clinic in Tegucigalpa. The Hospital Viera, built on the slopes of a mountain overlooking the city, is by far the best in Central America. Dr. Nutter gave us some very interesting highlights on the practice of medicine in Honduras.

At the American Embassy, we held interesting talks with Mr. Erwing, the Ambassador, and with Mr. Latimer, the First Secretary, relative to existing conditions in Honduras.

TELA R. R. COMPANY HOSPITAL (UNITED FRUIT COMPANY)

The three week period spent at this hospital was a most interesting and profitable experience. Since my interests are primarily in the laboratory field, I found an abundance of material to work with. New patients constantly being admitted to the hospital were drawn mainly from the plantations along the North Coast and from the towns and villages in the vicinity. In addition to the hospitalized group, there were large numbers of dispensary patients. The latter came directly to the laboratory for the collections of specimens and thus provided an excellent additional source of material. There were few restrictions with regard to the patients. I was given a free hand and allowed to work with any I chose. The members of the staff were very helpful in calling to my attention particular cases in which they thought I would be interested.

Numerous patients with malaria arrived at the hospital daily, thus affording a splendid opportunity for both laboratory and clinical examination. During the period I was in residence *falciparum* infections were encountered most frequently. Some of the patients with severe infections were brought into the hospital in coma. It was interesting that during the last week of my stay numerous quartan infections were found. Quartan malaria had not been encountered in this region for some time. Mixed infections were not uncommon. There was an extremely high incidence of infections with intestinal helminths in the general population. *Ascaris*, hookworm, *Trichuris* and *Strongyloides* were found most frequently. Several patients with frank amebic dysentery were examined.

Among some of the other conditions encountered were: a few cases of pinta; various types of ulcers; a liver abscess due to *B. typhosum* and a great variety of skin infections. A small boy was infected with the larvae of *Dermatobia hominis* and another with *Tunga penetrans*. One patient was admitted to the hospital for the treatment of snake bite.

A good collection of stained thick and thin preparations of malarial blood and an ample supply of concentrated fecal material was obtained for class work. Adult mosquitoes were caught or hatched from larvae collected by the local malaria control group. Kodachrome photographs were taken of some of the more interesting cases.

During the stay at Tela a most interesting trip was made to Lancetilla Valley, where the experimental gardens of the United Fruit Company are located. This place is a beautiful and fascinating spot. Rubber trees in all stages of growth, numerous varieties of tropical fruit trees collected from all parts of the world, the important medical trees, plants and shrubs, coffee trees, corozo palms (source of palm nut oil), spice and nut trees are found here.

The visit to the Carib village, about three and one-half miles down the beach from Tela, was likewise a most interesting experience. This native group has lost most of its Indian background and is distinctly negroid in character at the present. I was impressed by the excellent physical appearance of these people, —one of the healthiest groups I had encountered. They are intelligent, peaceful and clean. It was mandatory that the sea shore serve as the community toilet.

TOUR THROUGH THE BANANA PLANTATIONS IN THE VICINITY OF TELA, EL PROGRESO, LA LIMA AND SAN PEDRO SULA

For the last two days of our stay on the Northern Coast we were taken on a tour of the very extensive banana farms operated by the United Fruit Company. Dr. A. E. Moure, one of the staff members of the Tela Hospital, served as a most efficient and cordial guide. The several officials of the United Fruit Company, the overseers, the engineers and the members of the sanitary group, did everything in their power to make our trip profitable and interesting. Some of the highlights of this tour were:

Inspection of farm dispensaries.

Inspection of the community living quarters established for the farm laborers.

Inspection of a recently opened farming area. Malaria, dysentery and snake bites were the main problems encountered during the clearing and early construction periods.

Tour through the recently established abaca (source of hemp) plantations.

Visit to the Company Hospital at La Lima. The laboratory force was conducting malaria surveys. I had an interesting discussion with the technicians relative to their diagnostic methods and the problems they encountered. There were only four physicians on the staff and frequently they had to handle from 350 to 400 dispensary patients daily.

Visit to the industrial laboratories, experimental gardens and manufacturing plant. Extensive research was being undertaken relating to the production of various types of oils and chemicals. Castor oil, lemon grass oil, citronella, palm nut oil and sassafras oil, were being produced on a commercial scale. Menthol was produced from a recently introduced type of Japanese mint.

Visit to the Hospital del Norte in San Pedro Sula. This government hospital had only one physician who handled all of the services. Although conditions were far from ideal, they were far better than those observed in the Hospital San Felipe in Tegucigalpa.

GUATEMALA

Session at the Offices of the S.C.I.S.P.—Dr. Robert L. Vought, Chief of Party for Guatemala, gave a talk in which he discussed the program of the Servicio. The plans for the projected Roosevelt Hospital were examined and the proposed layout of wards, laboratories, services, etc., were considered in detail. Epidemiologic studies, the malaria control program and various services rendered to the Sanidad Pública were described.

Field trip through the highlands for the observation of typhus fever patients.—This most interesting trip through the mountains west of Guatemala City was ably conducted by Dr. Enrique Padilla of the Sanidad Pública. Typhus fever patients were observed at the following hospitals: Hospital San Martin Jilotepeque, Hospital San Juan Ostuncalco, Hospital Cantel and the Hospital José Felipe Flores at Totonicapan. During the sessions at these various hospitals ample opportunity was afforded to examine patients in various stages of the disease, the methods of isolation and hospitalization, control procedures and the methods of treatment. While visiting the hospital at Totonicapan, permission was granted by Dr. Constantin Alverez, the district military surgeon, to Dr. Furth and to Dr. Branch to perform a postmortem examination on one of the fatal cases.

The trip through the highlands was one of the most fascinating of the many I made while in Central America. The impressive, beautiful scenery (particularly in the neighborhood of Atitlan), the towns and villages and the native life and customs of the Indians are features which will be long remembered. Special mention should be made of Quezaltenango with its beautiful central square and Chichicastenango with its interesting market place, churches and local Indian religious rites embracing both Catholicism and the worship of non-Christian gods.

Visit to Palín for the observation of patients with onchocerciasis.—En route to Palín, not far from Guatemala City, a stopover was made at a "finca" where the habits of the local species of *Simulium* were observed. Larvae and pupae were collected from submerged undergrowth removed from a rushing stream passing through the "finca." Swarms of the adult gnats were seen flying at the edge of the stream.

At Palín, five natives infected with *Onchocerca volvulus* were on hand for observation. Examination of these readily revealed the small tumors in the skin. For our benefit, Dr. Francisco Diaz of the Sanidad Pública removed some nodules from one of the patients. The nodules were dissected and adult male and female worms demonstrated. Microfilariae were observed in preparations of pieces of skin clipped from the ear of one of the infected men. For class work a good supply of the larval, pupal and adult stages of *Simulium* was obtained as well as numerous enucleated nodules.

Visit to the Sanidad Pública in Guatemala City.—The laboratories and office of the Department of Health are located in a spacious, well equipped building. With Dr. Padilla acting as guide, several of the laboratories were

visited and discussions were held with various members of the staff. In the bacteriology laboratory, the methods and procedures employed in the examination of clinical specimens were observed. The staff member in charge of the serology laboratory discussed his research problem relative to the occurrence and detection of false positive reactions in the sero-diagnosis of syphilis. Dr. Romeo de Leon had set up a very informative demonstration showing the various stages in the life cycle of *O. volvulus* in man and in the insect intermediate host. The androphilic and zoophilic species of *Simulium* occurring in Guatemala were examined. Dr. de Leon discussed his work dealing with a variant of *Tryanosoma cruzi*. A recently acquired electron microscope was exhibited. At the end of the visit, the group was introduced to Dr. Carlos Estévez, the Director of the Sanidad Pública.

V

W. McD. Hammon
Assistant Professor of Epidemiology
University of California Medical School
San Francisco, California

SAN JOSE, COSTA RICA

The time from October 28th to November 5th was spent at San José, Costa Rica. Arrangement had been made by Major Glusker for us to visit at the San Juan de Dios Hospital. Mornings were spent in ward rounds with Dr. Peña and members of his staff, and in making special laboratory examinations. During the remainder of the day, laboratory material was studied under the direction of the Director of Laboratories. There were usually several autopsies a day which could be attended. Since the hospital had about fifteen hundred beds and drew patients from all parts of Central America, the variety of material was very great. Cases were seen of malaria, bacillary and amebic dysentery, many types of helminth infections, *Balantidium coli* and other protozoal intestinal infections, cutaneous and mucocutaneous leishmaniasis, granuloma inguinale, tropical ulcers, many types of deep and superficial fungus infections, leprosy and various avitaminoses of mixed types. A number of excellent photographs were made of some of the rarer types of skin lesions.

On one day a visit was made to a leprosarium and on another day the Costa Rican Health Department was visited.

ALMIRANTE, PANAMA

Between November 5th and 16th the time was spent at or near Almirante, Panama, on United Fruit Company's land. At the small hospital in Almirante opportunity was afforded to make rounds, assist in admitting patients, at clinics and at routine laboratory work. There was ample opportunity to study intensively the more interesting cases from the clinical or laboratory standpoint. Many trips were made to farms in Panama and Costa Rica where malaria surveys were being made. Considerable time was spent in studying the mosquito fauna and

mosquito habits of the region. In addition to many of the diseases seen at San José, an excellent case of secondary yaws was seen.

SAN JOSE, COSTA RICA

Another brief stay at San José was possible between November 17th and 21st. Again, the time was spent at the San Juan de Dios Hospital. It was of particular advantage to be able to follow up some of the cases seen earlier in the acute stage of illness.

GUATEMALA

Headquarters were made at Guatemala City from November 21st to 29th. Here under the able direction of Dr. R. L. Vought, and accompanied by Dr. Enrique Padilla, we made long and short field trips. The first was a three day auto trip into the mountain country to the north and east where a number of cases of classical type typhus fever were seen. The attempts being made to control the disease with American money were observed and studied. Sanitary conditions and living habits of these primitive Indian tribes was particularly interesting.

On another shorter trip a district was visited where onchocerciasis is endemic. A number of cases were seen, the removal of nodules was observed and these were dissected and the adults and microfilaria demonstrated. The control program was presented and discussed.

A visit to the Guatemala Health Department gave an opportunity to hear of many of the interesting aspects of health administration in this most unusual country. During the same visit many of the entomological problems of medical importance were discussed and the arthropods demonstrated. The research work on the transmission of onchocerciasis done by members of the staff was presented.

On a trip to the coast, the engineering aspects of a malaria control project were seen and discussed.

On still another trip the leprosarium was visited.

Although I have previously spent several years in the tropics in laboratory and clinical work, this trip has been most profitable. It permitted valuable comparisons to be made as to how race, habits, religion and physical environment influence the problems of health in the tropics. It afforded the opportunity of seeing several new diseases, new methods of treatment and diagnosis. It revealed a new high in industrial medicine in the tropics and furnished many interesting views of North American cooperation in tropical projects. Casual conversation with many privates and officers of the U. S. Army, gave some idea as to how our Army is handling problems of tropical sanitation, and questions of climatic and social adaptation. To limit my remarks to strictly medical problems would be a great injustice. The educational advantages of the trip from many other aspects have been great. Many of these will apply directly to the teaching of medical students. A reasonable amount of excellent demonstration and photographic material was acquired which will be a direct asset to teaching.

The Medical Science Center of Wayne University

EDGAR H. NORRIS
Dean of the College of Medicine, Wayne University
Detroit, Michigan

Schools of medicine are heirs to a noble tradition. Throughout the ages, and more conspicuously than most institutions, they have been dedicated to an ideal of complete and unselfish service, to the end that suffering be mitigated and the lot of humanity improved.

Wayne University College of Medicine proudly shares that tradition and the responsibilities which accompany it. Founded to serve a comparatively small town, the school has for many years been straining its inadequate resources to serve a metropolitan center and has been forced to overlook many opportunities for service. To realize more fully upon these opportunities the plan for the Medical Science Center was conceived.

On December 12, 1939, I became Dean of the College of Medicine and at once began the development of the program which is described herein and which had been outlined to our governing board prior to my appointment. At some future time, a detailed history of the development of the Medical Science Center may be written from the copious notes and documents which have accumulated. Now it will suffice to mention only three points. From the start we have worked closely with the local medical profession and have been guided in our thinking by the counsel of national leaders in the field of medical education. In the second place, such success as we are having has resulted from the association with the project of a group of carefully selected, deeply interested civic leaders; it took many months to educate those who now constitute our administrative group regarding the tenets of the program. Finally, I should point out that this project, long overdue, is of such magnitude as nearly to stagger the imagination. The project is so large, so unselfish, and so important as to make any individual actively associated with it feel small and at times futile and insignificant. It is a tremendous community program to which large numbers of men and women must make their contribution, and it is, therefore, a project which calls for a high type of unselfish, energetic leadership. The work thus far has been anything but easy, but it has been interesting, and the progress being made is both encouraging and stimulating.

The College of Medicine of Wayne University is Detroit's only medical school. For seventy-five years the institution has persisted and grown despite the difficulties engendered by transfers of administration and drastic reorganizations. In 1918, because of the increasing cost of medical education, the proprietary school became a municipal institution under the control of the Board of Education of the City of Detroit. In 1934, with the consolidation of the Detroit city colleges into a university system, the school assumed its present form and name.

Within the past few years, very real efforts have been made to extend the functions of Wayne University College of Medicine in its serviceability to the

community. The College of Medicine was reorganized seven years ago in accordance with standards set by the Association of American Medical Colleges and the American Medical Association. In these seven years the faculty has been altered radically, the program and policies of the college modernized and extended, and the physical plant has been utilized more completely. However, because of inadequate housing and limited staff, the college is continually, though reluctantly, turning from its doors many opportunities in the field of medical education which should be its responsibility. Further major additions to the program of the College of Medicine are almost impossible within the walls of the present quarters, and the addition of more courses, even a more complete development of the present courses, is prevented because of the heavy teaching schedule now being carried by the limited staff.

That Detroit needs a proper medical education center is self-evident. A large number of factors combine to make this a most fortunate city in which to undertake a modern expanded program in the medical sciences. A letter from the late Dr. William D. Cutter, Chairman of the Council on Medical Education and Hospitals of the American Medical Association, states:

> "Another asset, the value of which cannot be overestimated, is the fact that in the city of Detroit the clinical material potentially available for teaching is greater in proportion to the number of medical students than in any other city in the United States in which a medical school is located. Since medicine can be taught only at the bedside, the existence of such ample clinical facilities in the city of Detroit gives to Wayne University an opportunity to develop one of the greatest medical schools of this country."

It has long been accepted that schools of the medical sciences need to be located in urban and metropolitan areas where an abundance of clinical material is assured. Most cities of this country have appreciated the social contributions made by such schools and have wholesomely and proudly accepted their responsibility in providing support. It is time for Wayne County to develop its medical center in order to secure those bounties which will flow into the lives of its citizens from a great and modern health center. In an expanding program our antiquated housing and small full-time faculty may well prove to be advantages insofar as they will place minimal restraints upon efforts to adapt the future institution to modern trends.

During the past fifty years, the science of medicine has expanded tremendously. In these years the emphasis in medical thinking has shifted more and more away from diagnosis and cure toward the ideals of preventive medicine. Modern medicine concerns itself just as much with health and the preservation of health as with the diagnosis and cure of disease. Strange as it may seem, however, this philosophy has not yet become the theme of education in the medical sciences, and no institutions have been built or faculties and curriculums organized around this basic concept. A medical science center founded on this basic concept may well introduce the pattern of medical education to be copied

in the future much as the pattern utilized for the past half century was blueprinted at the Johns Hopkins School of Medicine.

The many activities of a college of medicine may be grouped in four major categories: undergraduate teaching, graduate training, continuation study, and medical research.

During the last few years, the undergraduate instructional program of Wayne University College of Medicine has been greatly improved. It must be admitted, however, that our undergraduate teaching program has been perfected to the limits of the present facilities. Laboratories and classrooms are crowded, and hospital facilities are poorly adapted for teaching and research. Further significant improvements in undergraduate teaching can come only through additions to the faculty and the construction of new medical school and hospital buildings.

A large percentage of the students in the College of Medicine are citizens of Wayne County, and most of them would find it difficult, or impossible, to obtain a medical education were it not for Wayne University. It is of impressive significance that almost 30 per cent of the doctors who practice in Wayne County are alumni of Wayne University College of Medicine; it is also a striking fact that Wayne's alumni who practice medicine in the state of Michigan are almost the same in number as is the group of graduates from the University of Michigan. Therefore, the quality of medical service rendered the residents of this county and state is in a large way directly dependent on the quality of education offered by the College of Medicine. It is axiomatic that in those places where the best medicine is taught, there the best medicine is practiced.

The second level of medical educational activity is the training of graduate students. This also is a definite discipline and leads to the Master of Science degree. It consumes from two to four years of time during which the student learns the investigative approach to medical problems.

In Wayne County the program of graduate medical education has been handicapped by the lack of hospital facilities and by the inadequate space available at the College of Medicine. Most of the residencies at Receiving Hospital (our college's main teaching hospital) and a limited number in other Detroit hospitals are now affiliated with the Graduate School of Wayne University, and physicians holding such positions have the opportunity of taking the necessary basic science courses to qualify for the American Board examinations and of doing the research required for the Master of Science degree. However, the number of physicians who are being trained thoroughly as specialists in local hospitals is much too small to meet the needs of the community. A major function of Wayne University's Medical Science Center will be to provide in its university hospital graduate training of the highest excellence. Thus will result an improved standard of medical care for the entire community.

The third level of medical education will attempt to meet the varied needs of the 3,473 doctors of Wayne County. In the County of Wayne there are more physicians than are to be found in thirty individual states of our union, and it is

to this large group of busy practitioners that continuation study is directed. The busy practitioner is constantly confronted with the problem of keeping abreast of recent developments in the rapidly expanding field of medicine, and even under our present limitations there were in normal times one or two hundred practitioners taking postgraduate courses in the school. Since more and better instruction to practitioners will improve medical service to the community, there can be no greater challenge in the field of medical education.

The postwar period will present a very immediate problem in the field of continuation study. Approximately one thousand physicians have already left Wayne County for the military services. When these men return, they will sorely need special postgraduate training to prepare them for re-engaging in civilian practice, and they will expect to be trained in institutions having facilities comparable to those to which they have become accustomed in the army and navy.

Scientific research is the fourth activity of a college of medicine. It is quite impossible to separate vital teaching from learning, and an active research program directed toward the end of extending our knowledge is of necessity an integral part of the program of any outstanding school. The possibility of making a great medical school from a good one depends on the ability of the institution to attract the best scholars and investigators, and this requires funds and facilities for progressive investigative work.

For the past seven years, the faculty of Wayne University College of Medicine has been very active in the field of medical research; every department has its investigative program, and significant contributions to medical knowledge are being made. However, at the present time, with every square foot of available space being utilized, very real limits are imposed on the members of our faculty. They cannot undertake the study of a large number of problems which continually arise in our great and distinctively industrial city. Facilities must be provided by means of which this valuable material can be utilized to benefit the human race.

Society looks to its medical schools, then, for the supply of personnel to the profession, for the maintenance of professional ideals, for the extension of knowledge, and for the critical analysis of new methods and procedures of practice. A medical school influences standards of practice in a community as no other institution or agency does.

The Program for the Medical Science Center of Wayne University

From the organizational point of view, the program envisions an institution of the medical sciences made up of all those units and schools concerned with the teaching of medicine and the related medical sciences. Such an organization will assure economies in education and in medical service, will bring about a more effective relationship among the members of the professions concerned, and will exemplify the best form of functional education. We are planning for the following schools and service units: School of Medicine, School of Pharmaceuti-

cal Chemistry, School of Industrial Health, School of Nursing, School of Technology in the Medical Sciences, School of Dentistry, School of Mortuary Science, School of Public Health, School of Continuation Study, University Hospital, University Outpatient Clinic, Library of the Medical Sciences, and Institute of Biological Studies.

Certain definite steps toward the realization of the Medical Science Center have been made.

1. By Act No. 248 of the Public Acts of 1941, a Board of Governors may be provided for the administration of Wayne University. During our work of the first year we encountered an expressed need for a legally constituted board of regents. This expression did not in any way disparage the Board of Education; on the contrary, from all sides there has been the highest commendation of the present board for having nurtured the University through its early development. Apparently the desire for a regency hinged on two concepts: (a) Because the University has grown to its present stature, with an enrollment of ten or twelve thousand students, and because the University's problems are essentially different from those of the primary and secondary schools, there appeared to be need for a separate administrative body. (b) Because no modern university program can be supported by tax funds alone, it was pointed out that in order to give the desired assurance to prospective donors, a governing board of nonpolitical character seemed necessary.

2. Though the Board of Education is providing liberally for the work of the College of Medicine, it is evident that optimal support will come from a combination of public and private funds. Therefore every assurance must be provided to encourage philanthropic support. By resolution of the Board of Education on November 9, 1943, a nonprofit corporation known as the Medical Science Center of Wayne University was established.

3. A campus site comprising fifty-three acres has been secured, and a part of the campus is now being acquired by condemnation. The campus represents an expansion of the city's art center and is close to many important hospitals. This land will provide a campus for the Medical Science Center which so far as its location and desirability are concerned will be second to none in the country.

4. Locally the program has obtained the enthusiastic endorsement of all the official agencies concerned as well as unanimous popular approval. It has been officially endorsed by the Board of Education, the Wayne County Medical Society, the Common Council of Detroit, the City Plan Commission, and Mayor Jeffries. All of the local newspapers and the populace in general have hailed the program as a worthy and necessary endeavor.

5. Act No. 236 of the Public Acts of 1943 permits the County of Wayne and the school district to appropriate funds for the construction of a university county hospital. This act further provides for a Board of Trustees to construct, operate, and maintain a university hospital.

6. In carrying out the provisions of Act No. 236 of the Public Acts of 1943, the Wayne County Board of Supervisors, on July 9, 1943, acted to provide funds

for architectural drawings of the University County Hospital. This appropriation represents a most significant step and indicates the responsiveness of the community to effective leadership.

MASTER PLAN OF THE MEDICAL SCIENCE CENTER

The location between Warren and Ferry and from Brush to Hastings is a most desirable site for a medical science center. This fifty-three acre tract, developed into a magnificent campus, will beautify the community and will provide sufficient ground for the full development of the medical center. In order to make certain that the end result will be both complete and thoroughly functional, construction must proceed through the years with the guidance of a master plan. The ultimate accomplishment must be a family of buildings architecturally enough alike to belong together yet sufficiently distinctive to typify their particular functions; a family of buildings so placed and related as to assure maximal serviceability as well as economical and efficient operation. A group of fine structures reposed in a campus with plenty of green areas will become a beauty spot to arouse civic pride. The front lawn for the hospital will be a broad greensward which through the years will add bits of real joy to the convalescent period of many a patient. The hospital and outpatient clinic together represent the principal architectural unit in the south portion of the campus and will be flanked on one side by a nurses' home.

Centrally on the campus and physically joined to the hospital will be the medical science halls. A large part of the work of the center will be carried on in these buildings. They will house the teaching laboratories and classrooms of all the schools of the medical sciences and the offices and research laboratories of all the departments.

The Library of the Medical Sciences will be located near the place where there will be a maximal congregation of workers and students. Since there is no outstanding library of this kind between Chicago and Philadelphia, this institution must be one of the important features of our campus. Its provisions must be adequate to meet the needs not only of the students and the faculty but of the community as well.

Balancing the library and situated at the opposite end of the inner campus will be the Recreation Center. This building, equipped with all the indoor facilities useful for recreation and for the maintenance of physical well-being, must be adequate to meet the needs of the faculty, student body, and staff.

Adjacent to the inner campus on the Hastings side will be located a service yard containing the powerhouse, laundry, and garage in one unit, and the Institute of Biological Studies in a separate building. Out-of-door pens and runways will surround animal quarters, and provisions wil be made for a variety of species.

The Institute of Industrial and Public Health will be placed centrally at the north end of the campus; it will house the most distinctive program of the entire center. Its tower, typifying health, will occupy a prominent place in the sky line. This building will be a large structure having a small auditorium,

large exhibit halls, a health maintenance unit, and small classrooms. The greater part of the space, however, will be made suitable for varying research programs through the installation of temporary partitions to make office-laboratory combinations. Space in the tower will be assigned to the business and administrative functions of the center and to such general service functions as medical illustration, medical editing, and publications.

The Center for Continuation Study, besides providing single rooms and small apartments, will possess a large auditorium. This auditorium will not only serve the needs of the campus but those of the professional community as well.

All of these structural units will be joined by tunnels and by walks and streets on the surface. Proper landscaping and plantings will screen the several parking lots and the other less attractive features and will unite and harmonize the whole into a beauty spot of urban planning.

THE UNIVERSITY HOSPITAL AND OUTPATIENT CLINIC

Through the functioning of the university and outpatient clinic a considerable item of community medical service will be contributed from the Medical Science Center. This service comprises the care of patients and is, therefore, not purely an educational matter. The care of patients becomes a matter of educational concern, however, when it is realized that both students and faculty in the medical sciences must work with sick folk in order to learn and to teach.

There are two practical features which need to be emphasized at the beginning. In the first place, the operation of a hospital and outpatient clinic is a business in itself, and, therefore, such an institution should be conducted and administered by a special board of trustees quite apart from the board whose interests are more directly educational. In the second place, definite economies will accrue to the community through utilization of the instructional staff in the care of patients. Men employed to teach will more than double their contribution by adding work in the hospital to their instructional duties, and what is equally important, a mutually advantageous relationship between teaching and medical service will be effected.

In our community there are many deficiencies which grow directly out of the fact that we lack a university hospital. A university hospital is always the backbone of an educational program in the medical sciences. The only medical school in Wayne County does not have a hospital under its jurisdiction. Hence the school cannot give its students the best clinical instruction, for medicine can be taught effectively only at the bedside, and an adequate number of selected cases must be available at all times. Because of its essential place in the teaching program, the presence of a university hospital in Detroit will elevate the quality of medical care throughout the entire county.

Further educational advantages of a university hospital are the impetus it gives to research; the opportunities for training it offers to dentists, nurses, pharmacists, medical technologists, and morticians; and the impulse it lends to postgraduate study. A good practitioner of medicine is always a student, but to be a good student he must have the best opportunities to learn. Many think

that the prime function of a medical school is the training of undergraduate students. While this is unquestionably a very important part of its work and in Detroit is concerned with about 300 students, the greatest challenge to a medical center located in Detroit will always come from the 3,500 practitioners of Wayne County.

The need for additional hospital beds in Wayne County has long been recognized, but the situation has now become critical. The sixteen largest cities of the United States provide an average of 8.8 beds per one thousand population; in Detroit the average is 5.3 beds per one thousand population. In order to insure proper health conditions in an area extremely vital to the war effort, more hospital facilities must be provided at once. Detroit needs at least a thousand additional hospital beds to begin to meet the needs of its great industrial population.

Furthermore, the facilities provided in Detroit and Wayne County for the care of the indigent sick have not been well organized. The City of Detroit Receiving Hospital is not a general hospital; legally it exists for emergency and mental cases only. What is more, Receiving Hospital is overcrowded much of the time, and the community is obliged to distribute indigent cases to various private hospitals. Often when facilities are overtaxed, acute cases only can be cared for, and a large number of seriously ill patients are turned away. Wayne University's hospital, restricted as it will be to the care of indigent patients, will partially care for the community's needs.

One can scarcely place too much stress, however, on the fact that a hospital and clinic is essential in a university organization only for the reason that it is needed in an educational program. In this regard certain very definite and fundamental tenets must be kept in mind.

A university does not desire to enter the hospital business. The capacity of a university hospital must be no greater than is required to provide an adequate number of selected patients for teaching purposes. Approximately three patients for each undergraduate student in the classes requiring clinical instruction should be available to supply the demands of a comprehensive educational program. Despite the fact that a high quality of medical service will be rendered in the university hospital, the capacity of the institution must never exceed the demands for proper education of medical students.

A university hospital must not duplicate existing facilities but must supplement community agencies in such a manner as to make all of them useful for teaching. Thus there is no need for us to provide beds for tuberculosis or contagious diseases; these maladies are adequately cared for in the Herman Kiefer Hospital, and the cases are readily available for instructional purposes. Likewise in pediatrics our affiliation with the Children's Hospital provides an abundance of clinical material. On the other hand, the community badly lacks modern provisions for the care of obstetrical and neuropsychiatric cases; therefore, plans may quite properly be made for the care of these at the university center.

The construction of a university hospital and outpatient clinic must follow a pattern somewhat different from that which would be satisfactory for a hospital whose only function has to do with medical service. The plans for a university hospital must include assembly halls, classrooms, amphitheaters, an abundance of special laboratories and examining rooms, and all of the special facilities needed for clinical instruction. Because these provisions require a large assignment of space, their inclusion will increase both the size of the building and the cost of its construction.

A certain number of beds must be available for groups of patients under study in special research projects. Both for the purposes of research and teaching, it is important that a university hospital be designed in such a manner as to make possible the segregation of particular kinds of cases. Here again attention to this detail will somewhat increase the size of the building.

THE HALLS OF THE MEDICAL SCIENCES

The Halls of the Medical Sciences, in housing the several schools of the college, will constitute the very heart of the Medical Science Center. In these halls will be located the classrooms and teaching laboratories as well as the offices and research laboratories of the departments engaged in the instruction of students. Here better than in any other place the efficiency and economy of a functional educational program will be exemplified and the minimization of duplication demonstrated. For example, the same department of anatomy will teach this subject to students of medicine, dentistry, pharmaceutical chemistry, nursing, medical technology, mortuary science, and public and industrial health, and will also provide instruction in anatomy for all students desiring training on the graduate and postgraduate levels. Similar service will be provided by the departments of chemistry, physiology, bacteriology, pathology, pharmacology, roentgenology, and all the clinical departments.

The Halls of the Medical Sciences will be a "school building," and construction must create an efficient workshop. Adequate space will be provided for the programs of each department and provisions made by which the functions of particular departments may be temporarily expanded or contracted. All permanent construction in this unit should be determined by the optimal size of the undergraduate classes to be taught in the several schools; for example, in the School of Medicine the facilities should provide for a maximum of seventy-five students in the entering class. Classrooms and laboratories will represent permanent construction while the smaller office-laboratory combinations for research will be separated by temporary, movable partitions. Indeed, because the medical sciences are developing rapidly, considerable space should be provided and left unfinished to take care of unpredictable additions. Adequate space must always be available in office-laboratory combinations to take care of the needs of every faculty member from the professor down to the young teaching fellow.

This great workshop must be related closely to the hospital, the library, and the animal quarters, and every facility must be provided to favor easy movement between these units.

THE INSTITUTE OF INDUSTRIAL AND PUBLIC HEALTH

The health and safety of a large part of the adult American public is the health and safety of the industrially employed. According to *The Monthly Labor Review,* there were in March, 1943, an estimated 15,719,000 persons employed in industry. An additional 25,000,000 people were engaged in mining, construction, transportation, utilities, and trades.

Contributions from all of the scientific fields account for the tremendous industrial progress noted in recent years. This stupendous progress, however, has brought with it specific human hazards arising from industrial techniques, from unknown contaminants in materials, from atmospheric pollutions, from extremes of thermal and other physical factors. Thus the industrially employed are not only affected by those illnesses from which all people suffer, but they are also susceptible to those maladies which we term the industrial or occupational diseases.

Medicine has found it difficult to keep pace with the enormous industrial advances of the last thirty years, and medical education has left to industry, labor and government the task of recognizing dangerous industrial conditions, of ameliorating these conditions, and of caring for the workers' health. Because of the scarcity of specially trained medical personnel, employers and insurance underwriters have been forced to take on themselves the responsibility for the health and safety of their employes, and not finding an adequate trained medical personnel, they have had to delegate the supervision of definitely medical problems to safety engineers, first aid assistants, social service workers, and nurses.

Crises such as we now face serve to focus attention on a situation long demanding remedy. There is not alone a dearth of specialists trained to cope with industrial health conditions, but there is likewise among the doctors educated for general practice a lack of training and experience in the field of industrial health. Thus there is a challenge to medical educators to give training in industrial health to all future physicians, some training to everyone, much training to those who would become specialists. The challenge cannot be met by the presentation of hurried intensive postgraduate courses in time of emergency. The field of industrial health has grown too large for this solution. In fact, the field has grown so large that industry now asks medicine not only to care for those in industry who are ill or hurt but to join with industry in study and research directed toward the prevention of occupational hazards.

The major social changes from our continually expanding industrialization have come about during the past thirty years. The pattern of medical education which has determined the organization and the curricular provisions of medical schools was blueprinted at a considerably earlier date. The colleges of medicine of this country vary somewhat in the details of their activities, but all subscribe to a rather stereotyped organizational pattern. Following this pattern, colleges of medicine have tended to become set in molds, and there is often considerable inertia to major changes in organization. It is probable that these

facts explain the lack of thoroughgoing courses in industrial health. Such efforts in this field as have thus far been made have been very incomplete in their scope and for the most part have had the character of curricular extensions from departments of public health.

There is no question but that every college of medicine should acquaint its undergraduate students with the general problems of industrial health; to this end some time must be provided in the undergraduate curriculum. Every physician should be graduated with enough knowledge of this subject to make him able to understand its general problems. However, the major activity of a well-organized and complete school of industrial health will be the postgraduate training of those physicians who intend to specialize in the field. In addition, a fully developed school of industrial health will carry on an extensive research program; the content of course work will become more significant in proportion to the productiveness of the investigative program.

This country does not need complete schools of industrial health in all colleges of medicine. It is likely that the country's need for organized and comprehensive training in this specialty can be provided adequately at three or four institutions. The factor deciding the location of the schools must, of course, be the availability of permanent, extensive industrial activity. Therefore, the outstanding schools of industrial health will have to be located in large metropolitan communities where industry is highly developed.

Detroit is not only the fourth largest city of the United States; it is also deservedly known as the "Capital of Industry" of the country. In this metropolitan community are located the nation's largest automobile plants and a great number of other manufacturing concerns of varying nature. The entire population of Detroit is geared to industry, and the social community probably typifies the purest form of industrial civilization yet known.

During the past two decades Detroit has evolved a form of industrial medicine which has been reasonably effective in meeting the problems of local industry. A few individual physicians have worked independently as pioneers and have trained younger men as apprentices. It is now time for Detroit to make available to the nation the knowledge which it has acquired and to further extend that knowledge by a serious and comprehensive investigative program conducted under the auspices of a well-organized school.

For a number of reasons Detroit is the place for a school of industrial health:

1. Geographically the city is centrally located.

2. Detroit assures the provision of permanent, extensive industrial activity.

3. Detroit has a congregation of men experienced in the field of industrial medicine from whose numbers the faculty of the school can be supplemented.

4. Detroit's Medical Science Center will provide a most favorable environment in which to locate a school of industrial health, for here a new school can be developed free from the restraint which might be imposed by tradition and inertia were the school established in an older institution.

5. The recent huge growth of industrial plants in this area has intensified the local need for specialists trained in industrial health.

6. An outstanding school of industrial health is necessary for national defense; it is essential to insure the health and safety of the people engaged in the defense industries.

The organization of the School of Industrial Health will include a number of divisions and departments as presented in the following outline. An idea of the scope of the educational program can perhaps best be grasped by a study of the organizational pattern of such a school.

DIVISION OF FUNDAMENTAL RELATIONS

- Department of Physical Preparedness for Industrial Occupations
- Department of Physical Examinations
- Department of Organization and Administration
- Department of Economics and Public Relations (Nonoccupational Illness, Utilization of Older Employes, etc.)

DIVISION OF SPECIAL MEDICAL AND SURGICAL RELATIONS

- Department of Industrial Psychology and Psychiatry
- Department of Acute Industrial Surgery
- Department of Restorative Industrial Surgery
- Department of Industrial Ophthalmology
- Department of Industrial Orthopedics
- Department of Industrial Radiology
- Department of Occupational Internal Disease
- Department of Industrial Nutrition
- Department of Industrial Toxicology
- Department of Industrial Dermatology
- Department of Physical Therapy
- Department of Occupational Therapy
- Department of Geographic Medicine

DIVISION OF ENGINEERING

- Department of Engineering Control of Hazards
- Department of Environmental Hygiene

DIVISION OF LEGAL AND INSURANCE RELATIONS

- Department of Insurance Theory and Compensation Law
- Department of Forensic Medicine

DIVISION OF RECORDS AND MASS STATISTICS

DIVISION OF GRADUATE STUDY IN INDUSTRIAL PROBLEMS

DIVISION OF CONTINUATION STUDY IN INDUSTRIAL PROBLEMS

DIVISION OF ADMINISTRATION

The curriculum of the School of Industrial Health must be made as flexible as possible in order to permit its unhampered evolution. Throughout the school, emphasis in teaching must be placed on practical information.

Since the activities of the School of Industrial Health will certainly represent one of the most complete programs of Detroit's medical center, it may

properly be housed in a separate building or institute. This arrangement will favor maximal development of the school, but it should in no way be accepted as an excuse for the isolation of the industrial health program from the programs of the other schools in the College of the Medical Sciences. The School of Industrial Health should be housed in a building which provides for a large number of small offices and laboratories. As in the Halls of the Medical Sciences, the office-laboratory combination should be thought of as the fundamental working unit, and numbers of these should be provided for each of the major departments of the school. In addition, a large exhibit hall, an auditorium of moderate size, and space for an exemplary health maintenance unit will be required.

For the purposes of economy, propriety, and organization the School of Industrial Health should be included in the same building with the School of Public Health. If, as is planned for the Medical Science Center of Detroit, maximal emphasis is to be placed upon industrial health, the public health activities in the Center should be placed in one wing of the same building. Since a public health program has recently been developed at the University of Michigan, there is no need for the duplication of effort in Detroit. By wise regional planning, these two schools of public health may integrate their functions and effectively and economically serve the commonwealth.

THE CENTER FOR CONTINUATION STUDY

I have made frequent reference to the fact that the study of medicine is a continuous and lifelong process, that educational opportunities and facilities must be provided for practitioners, and that the training of practitioners will constitute one of the major activities of our medical center. It is not generally known that the County of Wayne has more physicians than are licensed in thirty individual states of our union; the whole state of Maryland, for example, has nearly four hundred physicians less than Wayne County alone, but to serve the physicians of Maryland, two great schools of medicine are located in Baltimore. It is an astonishing oversight that no provisions have thus far been made for the continuous training of the men and women who furnish medical service to the citizens of our community. To repeat, the greatest challenge to a medical center located in Detroit will always come from the 3,500 practitioners of Wayne County.

The Center for Continuation Study will be one of the prominent buildings of our campus and from the point of view of function will be divisible into three parts: residential space, clubrooms, and large meeting halls. A considerable part of the building must be given over to single rooms and small apartments for the use of those who wish to separate themselves temporarily from their practices and reside for a time on the campus. The day of the refresher course is nearly past; in the future postgraduate courses will be planned to extend through several weeks or even months. One may even hazard an opinion that in the not distant future the national qualifying boards may require the taking of courses at regular intervals as the basis for continuing certification. To take such courses men will do well to leave their daily routine and move into an academic environment.

There is an additional reason for the provision of residential space. Many practitioners have gleaned ideas from their daily work, ideas which should be tested by the methods of scientific investigation. The initiation of study on most such problems will require a minimum of several consecutive weeks. Residing in our center, many a practitioner will be able to oversee and guide at least part of the research on certain of his own ideas. A committee on scientific research would evaluate such projects, and if we judge from medical history, a number of practical studies could be undertaken.

A second portion of the space in the Center for Continuation Study will be given over to clubrooms and to meeting rooms of varying size. Offices will be provided for the Alumni Association, and the activities of this organization will be largely carried on in the center.

Finally, a large auditorium and banquet hall will be included. These will not only serve the purposes of community professional groups but will also provide space for the entertainment of national meetings.

THE LIBRARY OF THE MEDICAL SCIENCES

Of the medical libraries in the United States there are but six which possess more than 100,000 bound volumes each. They are:

Name of Library	Number of Bound Volumes
Army Medical Library, Washington, D. C.	409,233
New York Academy of Medicine Library	231,848
Boston Medical Library	180,605
College of Physicians Library, Philadelphia	175,444
Academy of Medicine Library, Brooklyn	146,691
John Crerar Library, Chicago	108,559

In addition to bound volumes, these libraries all have large collections of reprints, theses, and pamphlets which notably extend the scope of their function. Besides these six great institutions there is a considerable number of smaller collections in the country, most of which are associated with universities and colleges of medicine.

The principal medical library of the city of Detroit is the Medical Science Department of the Detroit Public Library. Housed in one of the buildings of Wayne University College of Medicine, this collection consists of 43,710 bound volumes. Detroit began its accumulation of medical literature no later than did some of the other large cities of the country (1876). The Detroit library, however, during the six decades of its existence, has experienced an average annual addition of only 550 volumes whereas the other libraries just mentioned have grown much more rapidly.

Perhaps no department is more vital to the educational and research program of a medical school than its library. Indeed, if a medical school were to be appraised by a single criterion, the library might well serve, for it reflects the scientific interest of the faculty and the student body. Moreover, it is an index to the cultural standards and scientific tastes of the professional community which it serves. The easy availability of books and printed information is vital

to a community, and the medical library reflects the spontaneous individual desires and ambitions of the medical science professions.

The study and practice of medicine is something more than an art and a philosophy, and since it is dependent on advances in related fields of scientific endeavor, it is necessary for the modern medical library to contain extensive references in those sciences on which medicine heavily depends. Of these chemistry, physics, biology, psychology, and anthropology are notable examples. Likewise, reference material in public health and preventive medicine, in veterinary and industrial medicine, in military medicine, and in criminology is of sufficient importance to deserve particular consideration. Yet the task imposed on the medical school library of acquiring and making accessible the ever increasing numbers of medical publications is beyond the means provided by many of the medical schools of this country.

The service which the medical library may give depends on its accessibility, on the periodicals, monographs, and books it contains, and, above all, on the educational background and ability of the librarian and staff to provide something more than technical service, namely, an appreciation of the function of the library. A library is not merely a collection of books; it is also a means by which books may be used. The medical science library must make available all of the permanent and current medical literature for the greatest number at the least cost. This means books, people using them, and the work of bringing the books and the people together most effectively and economically.

In the construction of a modern library there must be no false attempt at heavy dignity and no copying of outmoded patterns; the new library must be one of the liveliest and most inviting buildings in the community, full of color, action, and interest, where all will delight to come and yet where the student who seeks quiet will find it thoughtfully provided.

Our library from the beginning must provide special services in particular subjects appropriate to the community, *e. g.*, industrial health and aviation medicine. It should provide a city-wide delivery and collection service. Because of the large number of physicians in this community, it should also plan to offer organized formal course work in medical bibliography. This is a most important factor in the continued education of the physician; his use of the library after graduation is in direct proportion to his knowledge of medical bibliography.

The library of the Medical Science Center of Detroit should have a capacity for 250,000 volumes and should be built in such a manner that its capacity can be doubled by the end of twenty-five years.

THE INSTITUTE OF BIOLOGICAL STUDIES

Medicine is a biological science, and a large part of the knowledge used in the practice of the medical sciences is based on animal experimentation. Animals are not only employed in research, but they are also essential for teaching in many departments and for clinical laboratory tests. Many species from frogs to monkeys are utilized.

Space will be needed in the Institute of Biological Studies both for the hous-

ing of animals and for modern research laboratories. The quarters must be planned in such a way as to provide the best hygiene and the most natural surroundings possible for a considerable number of animals from the various species; in addition to the indoor housing, outdoor pens and runs will be needed. Adjuvant to the program of the fully developed Medical Center, the breeding of animals will be found practical; special facilities will be needed for breeding, and it is not unlikely that a part of this work will be conducted on a farm remote from the campus where colonies of animals can be developed. The provision of modern research laboratories closely related to the animal quarters will both expedite work and increase the efficiency of investigators, making this institute an outstanding biological station.

THE RECREATION CENTER, THE NURSES' HOME, AND THE DORMITORY

Students of the medical sciences are an intent group and not a few succumb to illness which results from neglect of their physical well-being. Advantages must be provided which will be conducive to the maintenance of health of students, faculty, and staff and to the forming of good habits; certainly the personnel of the center should exemplify the best health practices. The Recreation Center will be equipped with all of the facilities useful for recreation and diversion and for the maintenance of physical well-being.

One of the problems regularly encountered in the operation of a hospital grows out of the necessity to provide residential quarters for the intern and resident staff. The dormitory will take care of these groups as well as those students who prefer to reside on the campus.

The nurses' home will provide living quarters for the graduate and undergraduate nurses who work in the center. In addition to these, this structure will contain a lounge, reception rooms, a banquet hall, and a few small classrooms.

• • •

In the elaboration of any long-range public enterprise, it is important that there be a carefully conceived general plan to guide the evolution of the program. The plan should be concerned not alone with the functional and building units but with matters of budget and finance as well. Since it is impossible to predetermine the timing of various additions to the Medical Science Center, the master plan must be consulted continually in order to obtain a completely coordinated and thoroughly functional center.

The economic resources of our community are superior to those of many states of the union, and now that Wayne County has been given a vision of its need for a Medical Science Center, the support for a full and modern program in the health sciences has become a part of dynamic and realistic planning. Through its far-reaching service in caring for the sick, teaching students, and conducting research, the Medical Science Center will take its place among the leading cultural institutions of the country and will become another one of those agencies to further establish Detroit in the esteem of the nation and the world.

Anatomy in Medical Education

DONALD MAINLAND
Professor of Anatomy, Dalhousie University
Halifax, Nova Scotia, Canada

Undergraduate medical education should prepare the student for general practice and should open doors that can lead to specialization. Most teachers would doubtless accept this statement, but probably few would confidently assert that present curricula, framed largely by specialists, nonclinical and clinical, are the best means of achieving such aims. Hence, presumably, arises some of the current disagreement on matter and method.

In anatomy, an old subject adjusting itself to a new world of medicine, such disagreement is naturally abundant. On this continent, where curricula are fortunately not dictated in detail by the more prominent institutions, an anatomy course is influenced by the instructor's own experience and interests, and by such environmental factors as equipment and budget, available time, number and quality of assistants, educational level of entering students, and the territory in which most graduates will practice—large cities with numerous specialists, or remote districts where general practitioners may have to do some major surgery. Even the students' limited finances may affect the course, by making the purchase of expensive textbooks a burden.

It is proposed here to discuss ideas and methods developed where most of the environmental factors were until recently unpropitious, except that there was freedom for pedagogical experiment and evolution. To such freedom I escaped seventeen years ago from the British uniformity and standardization, maintained by the system of external examiners and by enactments of the General Medical Council. On this continent I found that the Association of American Medical Colleges not only condemns stagnation and low standards but encourages experiments.

FUNDAMENTAL BELIEFS

Freedom to experiment in education often means freedom to discover for oneself, and to act on, certain very old principles, and thus I, an experimenter, arrived at two quite unoriginal beliefs:

(1) That the function of teaching is to help students to learn how to teach themselves.

(2) That the proper aim of learning and thinking is action.

If these beliefs and their corollaries receive more than lip service, they induce considerable changes in teaching. They show that anatomical training, for instance, should be practical in the widest sense of the term,—an education that best fits a student not only to start practicing his profession but to improve in it continually. For this purpose a general principle, or a method of thinking, or awareness of ignorance is often far more practical than a fact.

Such beliefs demand an effort not only to inculcate a scientific outlook in one's students but to adopt such an outlook in planning one's own teaching.

THE SCIENTIFIC OUTLOOK

Science in action is not the application of elaborate techniques, the recalling of a mass of complicated details, or the repetition of theories memorized in polysyllables. It involves recognizing the purpose of one's actions, the observation of relevant things and events by suitable and available methods, the application of selected facts, general principles and theories, and the candid assessment of one's results.

One of the greatest protagonists of science in medicine was John Hunter, now often misunderstood because classified as a comparative anatomist. The tragedy of British anatomical teaching for a hundred years has been its departure from Hunter in order to concentrate on descriptive gross anatomy. American anatomists, even of the nineteenth century, kept alive the Hunterian tradition by becoming investigators in zoology, histology and embryology, but many were frankly uninterested in the apparently static subject of human gross anatomy. In the present century, American teachers realized that anatomy, gross anatomy at least, should not be taught to undergraduates as if they were to become anatomists or clinical specialists. Many British anatomists are now coming to appreciate the same fact and some of them are adopting Hunter's breadth of view and experimental method of research. Many other medical science courses, however, have shown that teachers, although scientific in research, may be unscientific in their teaching methods; and some risks in the present trends are:

(1) Reduction of gross anatomy time without drastic reform in matter and method.

(2) Replacement of unnecessary details of gross anatomy by other details, equally unnecessary to the practitioner—details of development, of genetics, of hormonal control of tissues, and even of experimental techniques.

(3) Control of anatomical instruction by teachers without clinical experience or interest, or by clinical specialists, each stressing details required in his own specialty.

There is, therefore, need for scientific planning and experimentation in anatomical teaching, and a most difficult part in all experiments is the avoidance of personal bias. The pedagogical experimenter should continually ask himself, for instance: "Do I lecture mainly because I like lecturing?" "Do I minimize lectures because I dislike lecturing?" "Do I overload my neuroanatomy course because of the current interest in neurological research?" "Can I from my own student experience visualize the mental status, feelings and methods of undergraduates, or was I, like many embryo professors, an atypical student?"

AVAILABLE TIME

Gross anatomy hours in the United States are now much reduced, and a similar tendency is evident in Great Britain and Canada; but an anatomist who has an unbiased view of the whole curriculum, and who realizes how little of

real value was achieved by many of the thousand hour courses, will take the reduced time not as a matter for regret but as a challenge to make the best use of it.

Clinicians not unnaturally blame a senior student's ignorance of anatomy on the modern shortened course, perhaps because they are unaware of how much was forgotten after the long courses. Two instances out of many may be mentioned:

In a certain thousand hour course of gross anatomy the structure of the inguinal canal was taught in the first year by one of the most skillful teachers on this continent. The canal was reviewed in the second year and was known so well that further study at that time would have been wasted; and yet a surgeon, who was also an anatomy demonstrator, found that students were ignorant of it when they came to surgery classes.

Again, a quarter of a century ago, at a Scottish school renowned for anatomy, during an inquiry into the curriculum it was revealed that senior students hardly seemed to know that the recurrent nerve existed, although in the anatomy courses they had met and studied it on, perhaps, half a dozen different occasions.

DEVELOPMENT OF ATTITUDE

A student, learning how to educate himself, must know what he is aiming at, and he must from the beginning develop the proper attitude. Instead of being thrust immediately at the cadaver he should pass through a period of accommodation, during which he should learn that anatomy is concerned with living people, and that a practitioner has to consider not merely individual organs but the patient as a whole (body and mind), in accordance with Aristotle's statement regarding anatomical parts: "The true object of architecture is not bricks, mortar or timber, but the house."

During this introduction, the student must see that medical education is a unit—that division into subjects, into premedical and medical stages, into preclinical and clinical work, is artificial and misleading. Thus, he should be prompted to build his anatomy on his biology (although avoiding fallacious deductions from comparative anatomy), and he should see that anatomists must be concerned with function and experiments as well as structure and non-experimental observations. He must be shown how to link in his mind all parts of anatomy: embryology, histology and gross anatomy, including postnatal development; and how to use observations on disease in order to learn about healthy structure and function. He must realize that anatomy is used in all branches of medical work, not merely in surgery.

From the beginning, the student must be encouraged to question and criticize statements, looking for discrepancies and lack of clarity. He must be taught to demand, from himself and others, well founded facts; but he must realize that the memorizing of facts is not education. (The whole medical curriculum is calling for teachers who will act on this belief despite the outcry of specialists.)

It should be pointed out frankly to the student that he will forget many

things, as his teachers themselves are continually doing, and he must be shown how he can learn and review anatomy when he is in a busy practice hundreds of miles from an anatomy department.

The development of a proper attitude can hardly be tested by examinations. If, however, students in the dissecting room are seen frequently consulting reference books, palpating each other, and testing muscle functions; if they cease to glorify a teacher who oversimplifies and leaves them nothing to do but learn facts by heart; if they offer constructive criticisms of their teacher's statements; if it is found that senior students tell their juniors that no one can pass in anatomy without being able to handle a living person; and if at the end of a difficult course they still show abundant signs of the interest and zeal with which they entered the dissecting room,—then the instructor can feel that he has started them on the proper road to learn and use anatomy.

A few signposts on this road require further comment.

Correlation in Anatomy.—Instructors in gross anatomy, histology, and embryology can arrange informal interlinking without the somewhat complicated mechanics of strict "correlation" (interlocked teaching). For instance, before the first dissection begins, histological pictures of muscles, nerves and other tissues can be shown; and, if the histologist comes to the alimentary tract before the gross anatomist has reached the abdomen, dissected abdominal viscera can be displayed.

A fully correlated course appears very logical, but most of our learning throughout life does not follow a step-by-step pattern. We see old familiar things from new angles, and we meet complexities that drive us back to the elementary, to refresh our knowledge or to learn something previously neglected.

Pathology and Clinical Work.—A few of one's clinical colleagues may still believe in building brick upon brick ("clinical subjects" upon "preclinical") and one may need to explain to them that an anatomist must discuss disease and treatment, not only because he will thereby show a future practitioner why, and often how, to learn a fact, principle, or method, but because the concept of health or "normality" is impossible without reference to disease.

The anatomist's method of introducing clinical matters will depend on his clinical experience and reading. If he is not a medical graduate, he may have to collaborate closely with his clinical colleagues;[1] but he must insure (1) that the problems and working conditions of general practice are constantly remembered, and (2) that instructors and students make a conscious effort not to waste precious laboratory time by pursuing a clinical question beyond its point of anatomical usefulness. The introduction of actual patients must depend on local facilities, but even two or three, illustrating paralysis for instance, are valuable supplements to pictures and descriptions.

Textbooks.—The student should treat large anatomy textbooks as works of

1. I wish to acknowledge here my great indebtedness to my anatomical colleague, Associate Professor R. L. de C. H. Saunders, not only for supplementing my own clinical experience, but for his valuable co-operation and criticism during the development of the course.

reference, and should know their main weaknesses: their limited scope, emphasis on cadaveric anatomy, neglect of normal variation, and their dogmatic statements, uncritically passed from book to book without indication of their source or of gaps in our knowledge. The instructor's statements, even his textbook, if he has written one, should not be spared criticism. Students should see that they and their teachers are working together toward the same end, and will benefit by mutual criticism. (It is a useful lesson to learn that criticism is often most effective when it is most courteous.)

Pictures.—The value and dangers of diagrams should be indicated. Realistic and accurate pictures of specimens should be pointed out as the only "dissections" available to most graduates.

References.—We know that it is often better to learn where to find information than to learn the information itself, but we seldom wholeheartedly apply this principle to reduce the burden of the medical course. For instance, we may teach students about accessory foot bones. They forget most of what we tell them, and even if later on they consult their lecture notes or an anatomy textbook they will often fail to find adequate information. It would be much more sensible to familiarize them with a book that gives them this kind of information. Such a method would also show the student that much of the most valuable anatomical information lies in clinical journals and in books not labeled "anatomy."

Without excessive consumption of time the anatomist can interest the student in the use of a library, and, perhaps, help to prevent the rather pathetic dependence of some graduates on librarians whom they ask to search the indexes and journals for references and other information.

Reasoning and Dogma.—Some teachers apparently still think that students' textbooks should be dogmatic, whereas graduates' books should present evidence and reveal doubt, as if a medical degree miraculously bestowed reasoning powers. The same attitude is often adopted in class teaching.

Admittedly, one should not present detailed evidence for every statement, or leave a student in a swamp of arguments pro and contra; but some evidence and arguments must be presented if anatomy is to rank as a science at all. For instance, a dogmatic statement of Wolff's law of bone growth makes a student unreceptive to new evidence concerning it, and a dogmatic description of the mechanism of the foot does not fit him to meet patients with foot trouble. Clinicians, examining paralyzed muscles, have often been misled because unaware that textbook statements on muscle action were derived solely from the skeleton and cadaver.

Where facts are few or evidence is weak, this should be confessed. In medicine, as elsewhere, we must often act on scanty knowledge and tentative theories (working hypotheses), but we should not blind ourselves to our ignorance.

Even in regional anatomy, the difficulties and fallacies of reasoning processes (generalizations, theories and explanations) must be pointed out. For example, it simplifies the learning of abdominal relationships to note that structures of the alimentary tract lie between peritoneum and genito-urinary structures, but

such generalizations should be spoken of as "common arrangements" rather than "laws." To teach gross anatomy as if it were Euclidean geometry, with axioms, deductions and the like, takes it outside biology where it rightly belongs—the field of living things where surprises are always awaiting anyone whose eyes have not been sealed by dogmatic teaching.

GENERAL ANATOMY

One should try to understand structure and spatial relationships by appreciating development, and by finding generalizations applicable to different organs in the same anatomical system throughout the body. This "general anatomy" can be introduced during the period of accommodation by asking the student to think of a large crowd of adults and children. Certain obvious facts regarding size differences will lead to many other facts and ideas regarding variation, development and the structural principles of the body. The student should return to these facts and ideas frequently throughout his course, for they provide examples of principles that are applicable not only to the body as a whole but to all its structures and functions in health and disease.

The main classes of variation should be mentioned, e. g., sex differences, age changes from birth to old age; and an attempt should be made to dissect out some causal factors, e. g., heredity, endocrine secretions, and the environment. This can lead to a discussion of the much abused term "normal," which is becoming very important now that medical effort is turning more and more to the prevention of disease.

REGIONAL ANATOMY

For dissection and for many clinical purposes it is convenient to divide the body into regions when considering spatial relationships, bones, origins and distributions of nerves and vessels, attachments and functions of muscles. One must, however, repeatedly remind the student to link region with region.

Methods in regional anatomy comprise: (1) Examination of healthy living subjects, chiefly by inspection and palpation. (2) Study of cadaveric material. (3) X-ray anatomy.

The Living Subject.—The student's chief and best anatomical specimen is his own body. He should not treat surface anatomy as something extra to learn, but should use bones, dissected specimens, pictures, radiograms and textbook statements to help him to identify things seen and felt in living people; and, while seeing and feeling those things, he should visualize the things that he cannot see or feel. He should study the living body before dissecting, again while learning what he has seen in dissection, and in all available leisure moments. To appreciate variation he should examine several different people. A series of suggestions on method, issued at the beginning, enable him to get the most out of this work.

When students are being tested, a hospital outpatient, used as a subject, introduces an air of reality, and the students should know that credit, as in hospital, is given for the proper approach and conduct toward the patient. They should be required not only to find bony points, ligaments and muscles, to mark vessels, nerves and viscera (the ordinary "surface anatomy" test), but to ask

the patient to perform movements that will reveal muscle functions, and to visualize deeper and deeper structures, telling of their important relationships. Such tests reveal, better than does any other type of examination, the student's attitude, ability, usable knowledge, and the amount of practice that he has given himself.

The Study of Cadaveric Material should be treated as only a means to an end.

The salient features of a bone can be learned in five or ten minutes from well-labeled pictures and specimens, with a few notes. Further information can be acquired during dissection and palpation, and by examining and positioning a macerated bone in such a way as to help in identification of shadows in a radiogram—the "problem" method instead of textbook study or osteology lectures.

Dissection has some obvious advantages over mere inspection of prepared material, but this does not imply that every part of the body should be dissected minutely. (Animal experiments in physiology and pharmacology fit one to handle living tissues better than does cadaver dissection.)

Dissection is carried out with greater profit and economy of time, and with no loss of interest, if demonstration specimens and pictures of the appropriate region are exhibited in advance, especially if a book or journal article is displayed to show the clinical application of the anatomy. This "preview" method might be thought to rob dissection of its exploratory value, but it leaves much still to explore: differences among specimens and pictures, and, specially important, among living people. Time saved from routine dissection can be devoted to more useful tasks, for instance:

(1) Systematic observation and description. Although fundamental in all medical work, these are often neglected in school and college courses. Having given rules and suggestions, the anatomist should insist on practice, because students, after learning hundreds of textbook descriptions in anatomy, often make poor attempts when required to give an original description in a pathology class or to write a hospital case report. Description of a fragment of an animal's bone is a useful class exercise.

(2) Investigation of a clinically significant problem, e. g., the number of valves in saphenous veins of cadavera, the position of cardiac apex beats in fellow students. Even such simple problems illustrate research difficulties, observational errors and the need for statistical planning and analysis.

X-ray Anatomy.—At all times one must try to correct misimpressions created by embalmed cadavera. Visits to autopsies are useful for this. Other impressive methods are the display of an anesthetized laboratory animal with thorax and abdomen opened, and the rapid dissection by students of an unembalmed cat or dog still warm after death. Most important, however, is human X-ray anatomy, which is not a luxury, or a supplement to cadaveric anatomy, or a mere introduction to clinical radiology. It is the chief method of dissecting living people, by fluoroscopy (of students themselves) and by radiography.

Didactic Guidance.—The history of anatomical teaching reveals a wide range of methods. At the one extreme, the instructor has presented a cadaver

and large systematic textbooks, and has given help only when the student got stuck. At the other extreme, information has been poured down students' throats, and high marks have been awarded for verbatim regurgitation.

After trying various methods, I now present information covering the regional anatomy of the whole body, selected for its value (primarily to the general practitioner) from textbooks, monographs, numerous papers, from personal experience and from continual discussion with clinical colleagues. Part of the information is background material, not to be memorized, e. g., detail to render generalizations intelligible, to keep the idea of normal variation constantly in mind, or to show how specialists use anatomy. Very many facts of orthodox anatomy are omitted, but detail is given where practitioners need it, and special attention is paid to such topics as the anatomico-physiological aspects of hernia and appendicitis. Broad statements are given to cover the majority of normal variates, e. g., in arterial patterns, segmental origins of nerves, and levels of viscera. Relations of an individual organ, such as the kidney or thyroid gland, are not taught as isolated facts; instead, the region (abdomen or neck) is "built up" from vertebral column to skin.

Mnemonics, verbal or pictorial, are very rarely employed. When desirable, they are often best invented by the student himself, but they are most suitable for courses where names and facts have to be memorized rather than used. We seldom employ such devices when learning to find our way about a city.

A critic may say: "Is not this precise selection of facts an egregious example of 'spoon-feeding,' which contravenes your own principles of education?" "Should not the student be allowed to find his way, with a little guidance, in a large textbook?" Such questions can be answered thus:

(1) Even if a large textbook contained all the necessary information and if the student had time to select, summarize and organize from its raw material, he has no adequate criteria on which to do so. General guiding lines are not enough; for instance, big things are not necessarily more important than small things.

(2) To "know anatomy" is to have in one's mind an organized store of the most commonly used facts and principles, to know where to find others, and to be able to apply all of them to living people. An organized store of facts, principles and references is a tool presented to the student. He learns anatomy by learning how to use this tool.

(3) The student can modify this tool for his own purposes as his experience grows; and here is where reading in books and journals, at first under guidance, is profitable,—reading of "general anatomy" for ideas rather than facts to memorize, and reading about regional anatomy as used clinically.

LECTURES

I have found that most of the factual information in anatomy is best presented in mimeographed or printed form, to reduce inaccuracy, to insure that students watch and listen when talked to, and to save time for practical work.

Moreover, after graduation nearly all that one learns of other people's work comes from the printed page, and the undergraduate course should largely imitate this process. Talks to the class are, however, essential, in order to stimulate interest, to stress certain ideas, methods, or facts, to show how to build up a scheme of complex relationships, and to tell of new discoveries or illustrative clinical cases. Sometimes several weeks can elapse between talks to the class as a whole, for small group discussions are often more profitable.

If students insert signed questions and criticisms in a question box, topics of general interest can be separated from individuals' problems. The latter can sometimes be followed for a considerable distance, but they can soon encroach too far on the instructor's time outside of class hours and thus interfere with his own study and research. This ultimately retards the development of his teaching, because research and teaching should not be regarded as separate activities.[2] A student is best taught in an atmosphere of exploration, even if the results of the research have little intrinsic value.

LATER STUDY OF ANATOMY

The ultimate success of any anatomy course depends largely on the use made of it by clinical teachers, and it is now desirable to glance very briefly at three methods employed by these teachers.

Applied Anatomy Classes.—The term "applied" is a reflection on the academic anatomist; all the anatomy that he teaches should be applied, or at least applicable, to clinical work. The classes themselves are often, although not always, open to the following criticisms:

(1) Their method is too didactic.

(2) They, like applied anatomy books, are largely surgical.

(3) Clinicians, teaching anatomy, tend to reflect the orthodox textbook and their own student experience of anatomy, e. g., cadaveric concepts and neglect of normal variation.

At a school where the chief physician taught "medical applied anatomy" one of the best students was examined for an anatomy prize at the time of his final degree examinations. Asked for the position of the cardiac apex beat, he stated that it lies 3½ inches to the left of the median line, but made no reference to normal variation.

If separate applied anatomy courses are desirable at all, they should be linked as far as possible with the students' current clinical work. The students should review the basic anatomy before coming to class, should there listen to a short talk on its clinical application, and should spend most of the time examining specimens.

Conferences.—I have taken part in third year class meetings at which, usually with a patient on view, an anatomist, a physiologist, a pathologist and a clinician

2. The interaction of teaching and research may be curiously roundabout, as a personal note may illustrate. Quantitative investigations on mammalian ova, ovaries and uterine epithelium led me to explore the application of statistical methods to clinical and laboratory data. This impressed me with the neglect of normal variation in human anatomy, and the need for pedagogic information in this field led to X-ray investigation of thoracic and abdominal organs.

presented from their respective fields information bearing on a certain disease. Such conferences would be much more valuable if students and staff had previously reviewed for themselves the elementary facts in the various fields, and then applied these, and facts added by the specialists, to the particular patient. Students and staff would thus participate in a consultation and refresher course.

Anatomy in the Hospital.—The most important thing that a clinician can show to a student is how to use and increase his knowledge when faced with a patient. Students, examining a patient, are often asked questions on anatomy by clinicians who are either familiar with the anatomical facts or have reviewed them before meeting their students. Unless the student can be told what to review before seeing the patient, the clinician should demand only such facts as a general practitioner ought always to carry in mind. For the rest, and even for basic facts that may easily be overlooked, anatomy textbooks and atlases should be treated as a lawyer, engineer, or research worker treats his reference books. In hospital ward and clinic room the teacher and students should together search for the necessary information. Published case records show how the mere inspection of anatomical pictures would have prevented misdiagnosis even by specialists.

Many facts are best reviewed in the form in which they have already been learned, and, where an anatomy course has been designed for clinical needs, students should be expected to return to the notes, books and pictures used in this course. If the clinician would familiarize himself with these, he and his students could show the anatomist how they could be made still more useful.

THE INTEGRATED COURSE

Final assessment of the methods described in this paper may be impossible, but they will not be a complete failure if they do anything to alter the state of affairs that, even yet, makes "some of the best minds which enter the profession of medicine turn from anatomy with contempt."[3] It appears that many of the suggestions would apply *mutatis mutandis* to all other "preclinical" instruction, as a step toward an integrated medical course—a course in which students would meet patients from the start and would continue the study of the basic sciences, such as anatomy and physiology, to the very end. Whatever other steps may be taken in that direction the organization should be as simple and elastic as possible, for it is the spirit of teachers and students that counts, rather than details of method.

3. Keith, A.: *Brit. M. J.*, 2:409-411, 1926.

Liaison Psychiatry and the Pediatric Outpatient Department*

REYNOLD A. JENSEN
Assistant Professor of Pediatrics and Nervous and Mental Diseases
and
JOHN M. ADAMS
Assistant Professor of Pediatrics
University of Minnesota, Minneapolis, Minnesota

Psychiatry is emerging from isolation. This is demonstrated by the interest it has shown in medical education[1,2,3] and in liaison relationships to specialties in medicine, particularly the field of pediatrics.[4] Development in this area has been slow and steady, but not without resistance. The pediatrician, whose scientific training, clinical experience, and orientation differ from that of the psychiatrist, often has found the latter's terminology, methodology and formulations difficult to understand and accept. It is only as the psychiatrist has come to recognize these difficulties and has been willing, himself, to meet the pediatrician in his own setting that increased and mutually beneficial progress has been made.

From time to time reports[4,5,6] have appeared detailing this progress but, as far as is known, none has covered the advantages enjoyed by having a pediatrically oriented psychiatrist sharing responsibilities of the service with the pediatrician in a busy pediatric outpatient department of a large teaching hospital. Such a plan has been evolved, after several years of experimentation, at the University of Minnesota Hospital. It represents an attempt to deal more effectively with the child's total reactions to his total environment.

The University Hospital, an integral unit of the University of Minnesota Medical School, is a state institution serving largely the citizens of Minnesota outside the metropolitan areas of Minneapolis and St. Paul. Physicians from these outlying areas refer most of the patients for diagnosis and treatment, the majority representing the more difficult medical problems.

An average of 900 new patients are admitted to the pediatric outpatient department each year with an average of 5,750 follow-up visits.

According to established policy, each patient under 16 years of age, regardless of the nature of his complaint, passes initially through the Department of Pediatrics. This arrangement affords an excellent opportunity for the pediatric staff, as well as the senior medical students, to have first hand contact with all the medical problems occurring in children.

The clinic operates each morning of the week, but the psychiatrist attends only three sessions. He participates in the review conference held the last hour of the morning when several of the most interesting problem cases are presented for discussion. This proved to be an excellent teaching exercise.

The psychiatrist is on the outpatient staff. He functions like any other senior staff member. His chief task is to determine, with the pediatrician, what

* Psychiatric Clinic for Children and Department of Pediatrics, University of Minnesota.

can be done to serve more adequately the patient's total needs. No special office is provided for him. There is no selection of cases except as a need for his service exists. His work is done "on the spot," most often in the presence of the pediatrician or student with the parent and child together. Such an arrangement does not permit him to compensate for any feelings of insecurity (which he has all too often) by retiring behind the commonly accepted fourfold classical child guidance approach. Levy[7] has pointed out that while this approach has given the psychiatrist a feeling of security, it has contributed to the pediatrician's insecurity,—one of the difficulties which has delayed development of a good working relationship between the two disciplines. Our plan compels the psychiatrist to adapt himself to conditions prevailing in pediatric practice, and is useful both to him and to the pediatrician. Many times he must alter his own procedures and revise concepts formerly held.

A busy pediatric outpatient department, where "the everyday problems of the everyday child" pass in daily review, provides an excellent situation in which to study psychiatric disorders in their incipiency. Children chronically and acutely ill, parental difficulties of management in infancy and childhood, children with somatic complaints which defy definition and treatment; these and many others are the problems which confront the pediatrician in his everyday task. While accurate figures are not available to indicate the incidence of psychiatric problems occurring in children, it is generally agreed that psychogenic factors are of practical importance in the management of acute and chronic illness. Langford[8] has estimated that more than 50 per cent of the children seen in urban pediatric practice have personality and behavior problems. More than sixty pediatricians interviewed during a recent period of study[9] believed the incidence to be even higher. Our experience suggests that psychogenic and emotional factors require consideration in nearly every pediatric case.

Our primary aim has been to determine how effectively psychiatric principles and techniques could be applied in a natural medical setting by working together. In addition, we were interested in determining: first, how to arrive quickly at all the pertinent factors which would help to diagnose a case and treat patients more effectively; second, which patients could be handled successfully on an outpatient basis; and third, which patients should be referred for more intensive study and treatment.

This has been accomplished primarily because the pediatricians in our department, keenly aware of the importance of environmental, psychogenic, and emotional factors influencing the child and his illnesses, have wholeheartedly cooperated in the experiment. In part, we believe this has been a natural development growing out of the repeated demonstrations made since the establishment of the Psychiatric Clinic for Children in 1938 and the active teaching program[10] in operation since that time.

Briefly, the plan of operation in our clinic is as follows: The senior medical student does the preliminary work with the case. He takes the history and makes the physical examination. The importance of this procedure cannot be stressed

too much for it is only as the student gains experience, under supervision, that he develops skill in using the many "leads" furnished him.

The anamnesis is designed to elicit the nature and number of complaints and their duration. The present illness is then obtained. Birth, feeding, developmental and past health history are carefully scrutinized. Particular attention is paid to family organization, attitudes, relationships and economic circumstances (past and present), school and community adjustments, and the occurrence of any unusual events relating to the presenting complaint. As this information is secured and the physical examination is made, the attitudes of parent and child toward each other and toward the clinic experience are observed carefully. This has proved to be of immeasurable aid in evaluating the parent-child relationships. The importance of thoroughness cannot be overemphasized. Although time is required, many subsequent tests and procedures ordinarily undertaken are eliminated by this method.

Following the completion of this study, the student formulates his impressions and outlines his plan for further study and treatment. His work is then reviewed by one of the senior staff. The psychiatrist may enter the case at this point or the pediatrician may request his service later. A brief resume of the case is given the psychiatrist and he is introduced to the parent and child. The psychiatric interview is conducted with the mother and child together, the student (or students) observing. The actual time for the interview varies, but, as a rule, not more than one-half hour is allowed for any one visit. Every effort is made to conduct the interview in an unhurried and informal manner. Parent and child are encouraged to share alike in it. The response has been gratifying, for generally parent and child welcome an opportunity to tell their story. In this manner a cardinal psychiatric principle is demonstrated; namely, "be a good listener." But in addition, tensions (family as well as individual), frustrations and resistances reveal themselves in a "live" situation. It is here the psychiatrist must be most alert, for success or failure depends entirely on his skill in demonstrating the psychotherapeutic approach. It is clarified as the student begins to think of modifying particular relationships in the patient situation before him. The alert observer is quick to apply the principles illustrated in his future cases.

After this interview, it is often possible for the psychiatrist and student together to outline a treatment plan which is discussed with the parent and child. Sometimes further study is indicated. This may include requests for consultation with other specialized services available in the hospital, psychological testing, or help from the social worker assigned to the department. Later the case is again reviewed and plans are made accordingly.

In the total process, it is possible to deal with the anxieties of both parent and child, to help them appreciate the importance of emotional tension, to give reassurance and encouragement, and to answer their many questions.

While every effort is made to serve as many patients as possible within the department, those requiring intensive psychiatric service are referred to the

Psychiatric Clinic for Children. Discussion centered on their particular needs provides an excellent opportunity to stress the limitations of the pediatrician's role in the management of this group as well as to develop sound criteria for better referrals.

TEACHING.—The senior medical students come to their outpatient work ready to test lessons learned previously. During the junior year, they have had lectures in neuropsychiatry, and have served a ten weeks inpatient clerkship in both neuropsychiatry and pediatrics in which weekly lectures in child psychiatry have been given. Approximately 20 per cent of the students have been assigned to the Psychiatric Clinic for Children as part of the outpatient junior clerkship in neuropsychiatry.

We believe it is highly desirable to continue an active teaching program in the pediatric outpatient department. Teaching in such a setting is informal and spontaneous, growing out of a real patient's problem or questions occurring during the day's work. Opportunity is provided for the pediatrician and psychiatrist to present their respective points of view on many occasions. Students' questions (and they most often ask good ones in such an informal setting) are answered at a time when the need is there. In such a setting, the subtleties of disturbed emotional states arising from disrupted interpersonal relationships as well as gross psychopathology, and their influence on bodily processes are revealed in actual demonstration. Likewise, it is possible to demonstrate the importance of objectively recognizing and dealing with resistance inherent in many patient situations. The importance of the physician's orientation, his shortcomings and limitations, the many problems unconsciously precipitated in his every day work, are amply illustrated and discussed. These and many other lessons essential to good medical practices are pointed out in both the immediate patient situation and in the daily review conference attended by the entire outpatient department staff.

Teaching in such a setting is meaningful because it is geared to meet the actual needs in an every day situation. Every effort is made to relate these lessons to the general problems encounterd in practice.

COMMENT

Satisfactory results have justified the efforts expended. Principles of psychiatric theory and practice are applied routinely in pediatric practice. Psychiatric findings and formulations are expressed in simple, direct language easily understood by all. Many pediatric patients with psychiatric problems are handled successfully on an outpatient basis obviating the oft heard complaint that once the patient has been referred to the psychiatrist, he is lost. Better selection of cases for referral to the Psychiatric Clinic for Children is accomplished. While it is obvious that intensive work is required in many cases, the old notion that time is essential for all psychiatric work is corrected. Emphasis is placed on a more intelligent use of time available. The traditional fallacy of making the

diagnosis of a behavior or emotional problem in a child by exclusion is replaced by a concurrent consideration of every influence affecting the child's health.

The pediatrician has become increasingly aware of the importance of environmental factors affecting the child and his illness. He likewise has had an opportunity to observe and develop skills which result in better handling of parents and children. The psychiatrist has profited by intimate contact with patients in a medical situation and his respect has increased for the many subtleties influencing behavior which are ordinarily overlooked. Together the pediatrician and psychiatrist have established a good relationship within which each has better defined his own strengths and limitations.

REFERENCES

1. Ebaugh, F. G. and Rymer, C. A.: Psychiatry in Medical Education, The Commonwealth Fund, New York, 1942.
2. Proceedings of the Second Conference on Psychiatric Education: The National Committee for Mental Hygiene, Inc., New York City, 1935.
3. Proceedings of the Fourth Conference on Psychiatric Education: The National Committee for Mental Hygiene, Inc., New York City, 1938.
4. Proceedings of the Third Conference on Psychiatric Education: The National Committee for Mental Hygiene, Inc., New York City, 1936.
5. Kanner, L.: The Contribution of a Psychiatrist as a Member of the Pediatric Hospital Staff. *J. Pediat.*, 9, p. 558. 1936.
6. Herschka, M.: A Psychiatric Consultation Service in a Pediatric Outpatient Department, *J. Pediat.*, 24, 206-221. 1944.
7. Levy, John: p. 52, reference No. 4.
8. Langford, William S.: Psychopathological Problems, p. 923, Holt's Diseases of Infancy and Childhood, Holt and McIntosh, D. Appleton-Century Co., 11th Ed.
9. Personal communications to R. A. Jensen.
10. Clarke, E. K., and Jensen, R. A.: Integration of Psychiatric Teaching with Pediatrics, *J. Pediat.*, 18, 121-127. 1941.

PROGRAM

FOR THE

FIFTY-FIFTH ANNUAL MEETING

OF THE

ASSOCIATION *of* AMERICAN MEDICAL COLLEGES

TO BE HELD IN

DETROIT, MICHIGAN

OCTOBER 23, 24 AND 25, 1944

MONDAY, OCTOBER 23

Postwar Medical Education

GEORGE S. EADIE and W. C. DAVISON, Duke University School of Medicine.

Graduate Medical Education in the Postwar Period

C. SIDNEY BURWELL, Harvard Medical School.

Discussion opened by:

HAROLD S. DIEHL, University of Minnesota Medical School.

Deceleration of the Teaching Program

DONALD B. TRESSIDER, Stanford University.

C. C. CARPENTER, Bowman Gray School of Medicine.

J. ROSCOE MILLER and GEO. H. GARDNER, Northwestern University Medical School.

Discussion opened by:

FRANCIS SCOTT SMYTH, University of California Medical School.

Address of President

E. M. MacEWEN, State University of Iowa College of Medicine.

TUESDAY, OCTOBER 24

The Teaching of Physical Diagnosis

GORDON B. MYERS, Wayne University College of Medicine.

Requirement of Internship for Graduation

L. R. CHANDLER, Stanford University School of Medicine.

WILLIAM PEPPER, University of Pennsylvania School of Medicine.

C. D. CREEVY, University of Minnesota Medical School.

Discussion opened by:

STANLEY DORST, University of Cincinnati College of Medicine.

The Internship: When to Contact Students: Time of Appointment

JOSEPH TURNER, *Director* Mount Sinai Hospital, New York.

L. S. WOODWORTH, *Associate Director* Harper Hospital, Detroit; *President* Michigan Hospital Association.

Discussion opened by:

R. C. BUERKI, University of Pennsylvania Graduate School of Medicine.

JEAN A. CURRAN, Long Island College of Medicine.

WEDNESDAY, OCTOBER 25

The Teaching of Parasitology and Tropical Medicine

DANIEL E. HASLEY, Wayne University College of Medicine.

Mixed Task Forces in Medical Education

WILLIAM DOCK, Long Island College of Medicine.

Integration of the Curriculum: Overdepartmentalization

JAMES A. GREENE, Baylor University College of Medicine.

GEORGE T. HARRELL, JR., and HERBERT M. VANN, Bowman Gray School of Medicine.

Discussion opened by:

E. STANLEY RYERSON, University of Toronto Faculty of Medicine.

A Study Made by the Illinois Academy of Science on Premedical Education

C. I. REED, University of Illinois College of Medicine.

Discussion opened by:

GEO. H. GARDNER, Northwestern University Medical School.

Opening Dates of 1945 Sessions of Medical Schools of the United States

JANUARY

Tennessee	1
Wisconsin*	1
Indiana*	1
Illinois*	2
Buffalo	2
Southwestern*	2
Arkansas*	2
North Dakota	2
Syracuse*	3
Stanford*	6
Mississippi*	29

MARCH

California*	1
Dartmouth	5
Tennessee	26

MAY

Marquette	7

JUNE

North Carolina	15
Chicago	18
Cincinnati	19
Minnesota	20
Tennessee	25
Yale	25
Western Reserve	25
Utah	?

JULY

Oregon	1
Colorado	2
Duke	2
Oklahoma	2
Loyola	2
Albany	2
Med. Coll. Va.	5
Virginia University	6
Jefferson	16
Vermont	5
Pennsylvania	?

SEPTEMBER

Woman's	1
Tulane	1
Indiana**	3
Baylor	3
Georgetown	3
Alabama	4
Texas	13
Louisiana State	13
Hopkins	14
Tennessee	15
South Dakota	17
Nebraska	17
St. Louis	17
Long Island	17
Temple	17
Kansas	17
Southern California	17
Vanderbilt	18

*First Session. **Second Session.

SEPTEMBER (Continued)

New York Medical College	18
Louisville	19
Georgia	19
Iowa	20
Pittsburgh	24
North Dakota**	24
West Virginia	24
Harvard	24
Meharry	24
Wisconsin**	24
Maryland	25
Mississippi**	26
Bowman Gray	26
South Carolina**	27
Rochester	28
Creighton	28
Howard	29
Boston	?
Missouri	?
George Washington	?
Coll. Med. Evang.	?

OCTOBER

Emory	1
Cornell	1
Northwestern	1
Buffalo**	1
New York University	1
Southwestern**	1
Arkansas**	1
Illinois**	1
Wayne	2
Ohio	2
Syracuse**	2
Columbia	4
Stanford**	8
Michigan	29
Washington	?
Tufts	?

NOVEMBER

California**	1

NOTE: Michigan and Woman's admit annually. Tennessee admits quarterly.

JOURNAL
OF THE
Association *of* American Medical Colleges

Volume 19 SEPTEMBER, 1944 Number 5

The Detroit Meeting

The fifty-fifth annual meeting of the Association of American Medical Colleges will be held in Detroit, Michigan, October 23, 24 and 25, 1944. Headquarters will be the Hotel Statler. A cordial invitation is extended to all those who would like to attend the meeting. They may participate in the discussion of the papers to be read. Sessions will be held only in the morning of each of the three days of the meeting. The Executive Session will begin on Tuesday, October 24, at 4 P. M. and will continue, with an intermission for dinner, from 6 to 7:30, until all business is transacted. This session is open to all the delegates from all the member colleges.

The faculties of the medical schools are reminded that every member of the faculty is as much a member of the Association as the dean, the official representative of the faculty. The Association of American Medical Colleges is an association of colleges, not of deans. Too often it has been dubbed an association of deans. It is not that at all. It is an association of colleges and every member of the faculty has the right to participate in all discussions of papers read and matters of business on the agenda of the executive session. It is desired that every member college be represented by as many of its faculty as care to attend the meeting. They, more than any one else, are or should be interested in whatever transpires.

The Association has not met in Detroit since 1892 under the presidency of the late Dr. N. S. Davis, dean of the Chicago Medical College, now the Northwestern University Medical School.

Postgraduate Medical Education

The W. K. Kellogg Foundation is interested in helping to develop good postgraduate medical education for medical officers returning from service and men who have not been in service. The Foundation is making a survey of medical schools to determine which schools can set up and develop good courses for postgraduate work. Having done so, it is prepared to give financial support to such schools as may be selected. It must be emphasized that postgraduate, not graduate, education is what the Foundation will support. It is interested wholly in giving opportunity to become a better general practitioner and give good service to the people. A part of the plan is to select schools somewhat on the basis of location; in other words, a geographic selection since that is believed to be in the interests of the physician who may wish to avail himself of this fine opportunity to continue his education. Doubtless, the Foundation will, when it is ready, announce its program so that details will be made known. What is said here is not at all official or even authoritative. It is a statement of information which has become available. Authoritative information can come only from the Foundation itself.

◆ ◆

Navy Orders on Internships

The Bureau of Personnel of the U. S. Navy has issued the following orders in re internships.

The Commanding Officers of all Navy V-12 Medical Units are requested to advise all medical students negotiating for intern training in civilian hospitals that it is the desire of this Bureau that they make every effort to contract for rotating

internships. The State Chairmen, Procurement and Assignment Service for Physicians, Dentists, and Veterinarians will be pleased to furnish such students with the names of hospitals offering rotating internships. Any student unable to obtain a rotating internship must submit a statement to this Bureau via the Bureau of Medicine and Surgery indicating the reasons therefor and the type of internship which has been offered.

Commanding Officers are further requested to advise all medical students that contracts for civilian internships should be negotiated in sufficient time to allow them to begin their intern training not later than thirty (30) days after scheduled date of graduation from medical school. In the event that it is not possible for them to contract for intern training to begin within thirty (30) days after scheduled date of graduation, it is requested that this Bureau be advised, via the Bureau of Medicine and Surgery, the reasons therefor in order that appropriate action may be taken.

◆ ◆

1945 Sessions

Elsewhere in this issue is published the list of opening dates of 1945 sessions of the medical schools of the United States. This information was secured directly from the schools and is, therefore, undoubtedly correct. In a few instances the day of the month is not given because a definite decision had not yet been made. In other instances, it is possible that the date of opening will be changed from the date given to one in September or October if it is decided to admit annually. Some schools have made that decision already. That will not affect acceleration which will continue until the need for it has passed.

Students from Latin American Republics in Our Medical Schools

The Clearing House on Student Interchange of the Institute of International Education operates under a grant from the Department of State in the interest of educational and professional relations with sister Republics of the Western Hemisphere. It is doing a splendid job.

A list just received, covering the period 1943-1944, shows that 351 students from 20 Latin American Republics are students in medical schools and colleges of the United States. Of that number, 183 were taking work in medicine; 54 in public health and allied fields and 56 were taking premedical courses. Many of these students are receiving financial support from a large number of agencies and foundations. It is a fine effort to establish friendly relations and understanding between persons of various nationalities. The medical schools participating in this effort deserve commendation.

◆ ◆

Soldier Medical Students

On July 21, 13,963 students in the medical schools of the United States were soldiers in the U. S. Army assigned to this special professional training under the Army Specialized Training Division. This is about 55 per cent of all medical students.

◆ ◆

Pathologist Seeks Position

Head of Department of Pathology and Bacteriology in Midwestern medical school desires to make a change. Outstanding record as teacher and administrator. Special interest in tropical diseases, cancer, legal medicine and public health. Address 101, c/o Journal A.A.M.C.

College News

Long Island College of Medicine

Retiring: Dr. Tasker Howard, professor of medicine; Dr. Edgar D. Congdon, professor of anatomy, and Dr. Mathew Steel, professor of biochemistry.

New Appointments: Dr. William Dock, professor of medicine (full time); Dr. Edward Muntwyler, of Western Reserve, professor of chemistry; Dr. James B. Hamilton, of the University of Missouri, professor of anatomy; Dr. Fred L. Moore, of the Commonwealth Fund staff, professor of social and environmental medicine in the department of preventive medicine and community health. Dr. Moore will also function as director of the Polhemus Clinic of the Long Island College Hospital; Dr. E. J. Tiffnay, associate professor of bacteriology; Dr. F. E. Mallon, Dr. Charles A. Hargitt, Dr. E. Clifford Place and Dr. Michael Buonaguro, assistant clinical professors of ophthalmology; Dr. Emmanuel Mendelson, clinical professor of radiology; Dr. F. Paul Ansbro, assistant clinical professor of surgery.

The Third Postgraduate Course in Industrial Medicine will be given under the auspices of the Department of Preventive Medicine and Community Health during the three week period October 16 to November 3, 1944, and will be conducted by more than fifty leading physicians in industrial practice, authorities in allied fields and members of the faculty of the College.

The main objective of the course is to provide physicians engaged in full time or part time industrial practice, as well as those who wish to enter this field, an opportunity to orientate themselves more fully to modern procedures in the rapidly developing specialty of industrial medicine. Although designed for graduate physicians, the course will be open to industrial executives, personnel workers, industrial nurses, hygienists, engineers and to others interested in industrial health. The presentation of the course will include afternoon and evening lectures and seminars at the College supplemented by morning clinics and demonstrations arranged in cooperating hospitals and industrial medical departments. Segments of the course will be devoted to Medical Administration in Industry, Industrial Aspects of Internal Medicine, Industrial Surgery, Occupational Diseases and Personal Relations in Industry. A unique feature of the course is the emphasis which will be given to the medical aspects of personnel problems.

Enrollment in the course will be limited to sixty full time students and a tuition fee of $60 will be charged for the entire three week course. A limited number of applicants particularly interested in specific phases of industrial medicine or with special qualifications will be accepted for admission on a part time basis. All inquiries concerning the course should be addressed to Dr. Thomas D. Dublin, Department of Preventive Medicine and Community Health, 248 Baltic Street, Brooklyn 2, New York.

◆ ◆

University of Texas
School of Medicine

A survey of the medical education needs of the state of Texas will be carried out by a committee recently appointed by the board of regents of the University of Texas, the purpose of which is to determine the most appropriate way the university may serve the state in providing educational facilities for promoting the health of the citizens. The survey will include all parts of the state. Members of the committee include members of the board of regents, the dean of the school of dentistry in Houston, Fred C. Elliott, Chauncey D. Leake, Ph.D., dean of the medical branch at Galveston, and Homer P. Rainey, president of the University of Texas.

The Sealy and Smith Foundation of

Galveston has offered one million dollars to the University of Texas for a new general hospital unit at Galveston. The gift is contingent on the university's spending about another million dollars for a new hospital, which would furnish some 500 more beds than the 400 now available at John Sealy Hospital. The offer was made for the construction of a pavilion to be known as the R. Waverly Smith pavilion for both pay and semipay patients. The proposed unit, for which the foundation would also provide x-ray equipment and clinical laboratories, would be joined to the present outpatient clinic and children's hospital. Part of the new construction would occupy the site of the women's dormitory on the medical campus. The regents have agreed to provide a new building for women students. The Sealy and Smith Foundation was established in 1927 to promote the development of the John Sealy Hospital of the University of Texas Medical Branch for the purpose of aiding in the care of the indigent sick of Galveston. Since the foundation was established with bequests of John Sealy, Jr., and Mrs. R. Waverly Smith, it has contributed more than $1,500,000 to the upkeep and support of the hospital and has contributed over $550,000 toward the expense of new building. It continues the benefactions of John Sealy, who died in 1884 and whose will made possible the establishment of the hospital in association with the medical branch in Galveston in 1890.

Mr. and Mrs. Maco Stewart of San Antonio and Galveston recently offered their Galveston Island estate to the University for use as a convalescent home for children. At the July meeting of the Board of Regents, this offer was accepted, and the estate was named the Margie B. Stewart Convalescent Home for Children. Exceptional facilities are available for handling between 30 and 50 convalescent children, with outdoor fresh and salt water pools, and special facilities for physical and occupational therapy. The project will comprise an important part of the Child Health Program of the University as supported by the William Buchanan Foundation of Texarkana. The medical work of the new Home will be under the direction of Dr. Arild E. Hansen, professor of pediatrics, while the surgical aspects and the physical therapy will be under the direction of Dr. G. W. N. Eggers, professor of orthopedic surgery.

* *

University of Illinois
College of Medicine

Dr. Geza de Takats, associate professor of surgery, University of Illinois College of Medicine, Chicago, delivered the fifth Samuel D. Gross Lecture at the University of Louisville School of Medicine, May 23, on "The Causalgic State in Peace and War." The lectureship is sponsored annually by the University of Louisville chapter of Phi Delta Epsilon.

Dr. Granville A. Bennett, professor and head of the department of pathology at Tulane University of Louisiana School of Medicine, has been appointed to a similar position at the University of Illinois.

Dr. Theodore J. Wachowski, assistant professor of radiology and assistant director and chief of x-ray therapy in the Research and Educational Hospitals, University of Illinois, outpatient tumor clinic, on a temporary basis has been appointed in charge of the department of radiology.

Dr. Julius H. Hess, professor and head of the department of pediatrics, retired on age. He has been given the title of professor emeritus.

Promotions: Dr. Milan V. Novak, professor and head of the department of bacteriology and public health; Dr. Henry G. Poncher, professor and head of the department of pediatrics; Aaron Arkin, Rush professor of medicine; Dr. Richard L. Jenkins, associate professor of psychiatry and acting superintendent Institute for Juvenile Research; Chester W. Darrow, Ph.D., associate professor department of criminology, social hygiene and medical jurisprudence; Dr. Norris J. Heckel, associate professor of surgery; Dr. John M. Dorsey, assistant professor of surgery; Dr. Noah D. Fab-

ricant, assistant professor of laryngology, rhinology and otology; Dr. Edward Piszcek, assistant professor of bacteriology and public health; James C. Plagge, Ph.D., assistant professor of anatomy; Dr. John V. Prohaska, assistant professor of surgery.

◆ ◆

Louisiana State University
School of Medicine

Dr. John R. Schenken, Professor and Head of the Department of Pathology and Bacteriology, was elected president of the Louisiana Associaton of Pathologists at a meeting held on July 6, 1944 at Charity Hospital. Dr. Emma S. Moss, Assistant Professor of Pathology and Bacteriology, and Director of the Department of Pathology at Charity Hospital of Louisiana in New Orleans, was elected secretary-treasurer.

A symposium on the heart and circulation will be held on October 25, 26 and 27, 1944, from 9:30 a.m. to 5:00 p.m. each day. Those who are interested are invited to attend. No fee is charged. The visiting participants are Dr. Maurice Visscher, University of Minnesota, who will discuss cardiac efficiency and metabolism; Dr. Isaac Starr, University of Pennsylvania, who will discuss the ballistocardiograph; and Dr. Frank N. Wilson, University of Michigan, who will speak on electrocardiography. Other speakers are from Tulane University and Louisiana State University.

◆ ◆

Baylor University
College of Medicine

New Appointments: Dr. Carroll A. Handley, formerly of the University of South Dakota, assistant professor of physiology and pharmacology; Dr. George W. Salmon, formerly of Washington University, assistant professor of pediatrics; Dr. Don W. Chapman and Dr. W. H. Coulter, Jr., instructor in medicine; Miss Ella May Shackleford, student of the late Max Broedel, medical illustrator in the department of visual education.

The John and Mary R. Markle Foundation granted $7,000.00 to Baylor in support of Dr. Allen D. Keller's research on brain stem and related hypophysial and cerebellar functions, during the next two years. Dr. Keller is professor and chairman of the Department of Physiology and Pharmacology.

Major Carl T. Javert, M.C., U.S.A., chief of the general surgical service at Seymour Johnson Field, member of the Department of Obstetrics and Gynecology at Cornell Medical College, was a guest of Baylor University College of Medicine at Houston, June 21, 22 and 23. Major Javert lectured to the students and faculty on "Erythroblastosis Fetalis." The visit of Major Javert was made possible through a grant by the H. E. Butt Foundation of Corpus Christi, Texas.

◆ ◆

Harvard Medical School

The Nutrition Foundation has awarded grants to Harvard Medical School, Boston, to support fellowships in clinical nutrition, effective through the years 1944, 1945 and 1946. The fund will be administered under the supervision of Dr. Frederick J. Stare, assistant professor of biochemistry and nutrition. Two types of training are provided for by the fellowship fund: postdoctorate training in medicine and advanced training in medical nutrition for dietitians.

René J. Dubos, Sc.D., has resigned as George Fabyan professor of comparative pathology and tropical medicine, to return to the Rockefeller Institute for Medical Research.

◆ ◆

Woman's Medical College

Dr. R. Manning Clarke, Los Angeles, has been appointed clinical professor of medicine. Dr. Clarke formerly was a member of the faculty of the College of Medical Evangelists.

Dr. Lloyd D. Seager left the University of Tennessee College of Medicine to accept the position of professor of pharmacology and toxicology.

University of Alabama
School of Medicine

It has been decided that instruction in the first and second years will be given in Tuscaloosa until the new medical building has been completed in Birmingham, which, presumably will be after the end of the war. Upper class instruction will be given largely in the Hillman Hospital in Birmingham, where temporary quarters for the faculty will be provided—or in the Jefferson Hospital. Instruction for the junior class is scheduled to start in Birmingham on June 4, 1945. It is possible that only one-half of the present freshman class will be permitted to enter this class. Students will be given the option of transferring to Birmingham or elsewhere. Dr. Stuart Graves, dean of the school for many years, who has been succeeded by Dr. Kracke, has been requested to remain as dean in Tuscaloosa until the transfer of the whole school to Birmingham.

Dr. Paul C. Bucy, professor of neurology and neurologic surgery, University of Illinois, delivered the annual lecture of the Gorgas Medical Society.

✦ ✦

Wayne University
Medical Science Center

Selden B. Daume, president of the Detroit Trust Company and treasurer of the Red Cross, has been named by the Detroit Board of Education to membership on the Board of Trustees of the Wayne University County Hospital. He replaces B. E. Hutchinson, whose term expired June 30. The Wayne University County Hospital will be a $2,000,000 structure, for indigents, to be a part of the projected $50,000,000 Medical Science Center of Wayne University. Wendell W. Anderson is the Center president.

Charles F. Kettering, General Motors vice president in charge of research, will be the final banquet speaker at the three-day annual meeting of the Association of American Medical Colleges in Detroit next October 23-25.

University of Wisconsin
Medical School

The Interim Committee of the State Legislature of Wisconsin has recommended an addition to the Wisconsin General Hospital. The amount appropriated was $400,000.

Promotions: Dr. Ovid O. Meyer, from associate professor to professor of medicine; Dr. Karver L. Puestow from associate professor to professor of clinical medicine.

Frances A. Hellebrandt, associate professor of medicine in charge of physical medicine, has resigned in order to take a position at the Medical College of Virginia. Dr. Elizabeth Grimm, resident in medicine at the Philadelphia General Hospital, has been appointed assistant professor of physical medicine, in charge of physical medicine.

✦ ✦

University of Utah
School of Medicine

Dr. Francis D. Gunn, associate professor of pathology at Northwestern University Medical School, has been appointed professor and head of the department of pathology as of September 1st. Dr. Chas. E. McLennan, associate professor of obstetrics and gynecology in the University of Minnesota Medical School, has accepted the professorship of this department at Utah.

✦ ✦

Bowman Gray School of Medicine

The City Hospital plans to spend two and one-half million dollars, and the college is putting on a campaign for two and one-half million dollars. The trustees of the Baptist Hospital have authorized the construction of a new wing and a new outpatient department building. Construction on these two buildings will begin as soon as priorities can be cleared. The outpatient building is the gift of an anonymous donor. This phase of the expansion program will cost one million dollars. An addition to the nurses' home is now under construction at a cost of $126,000.

University of Virginia
Department of Medicine

Dr. Wendell M. Stanley, of the Rockefeller Institute for Medical Research, Princeton, New Jersey, delivered the annual Phi Beta Pi Medical Fraternity lecture on July 24th. He spoke on "Viruses and Their Relation to the Tumor Problem."

Lt. Colonel Daniel C. Elkin, Surgeon-in-Chief at the Ashford General Hospital, West Virginia, gave the annual address at the time of the initiation exercises of Alpha Omega Alpha August 11th. He spoke on "Arteriovenous Aneurysm, Review of Cases Resulting from War Wounds."

Dr. Herbert Silvetto, Assistant Professor of Pharmacology, Materia Medica, and Toxicology, has received a third grant of $250 from the American Medical Association for continuation of investigation of the effect of low barometric pressure on kidneys previously damaged, either surgically or by drugs.

◆ ◆

Tufts College Medical School

The selection of a professor of nutrition is being considered. Last year Tufts established a fund in the medical school to commemorate the seventieth birthday of Miss Frances Stern, chief of the food clinic of the Boston Dispensary. The fund was to be used by Miss Stern to extend the research and educational activities of the clinic. Recently the Frances Stern Committee on Nutrition was created. The Charles Hood Dairy Foundation, a local group, has voted to contribute half the amount annually for three years that the nutrition committee believes would be needed to begin the project.

◆ ◆

Tulane University
School of Medicine

Dr. Granville A. Bennett, professor of pathology, resigned to accept a similar position in the University of Illinois. Colonel Robt. A. Strong resigned as professor and head of the department of pediatrics. He is succeeded by Dr. Ralph V. Platou.

University of Michigan
Medical School

Dr. Richard H. Freyberg, assistant professor of internal medicine and in charge of Rackham Arthritis Research, has been appointed chief of the department of medicine and pediatrics at the Hospital for Special Surgery, effective September 1. Dr. Freyberg will succeed Dr. Carlisle S. Boyd, who has been appointed to the board of consultants of the hospital. The Hospital for Special Surgery is maintained by the New York Society for the Relief of the Ruptured and Crippled.

◆ ◆

Columbia University College
of Physicians and Surgeons

A series of part time courses in clinical medicine at the Mount Sinai Hospital, beginning September 25, is announced. A full time course in the recent advances in gynecology is planned for November 13-18. Additional information may be obtained from the Secretary for Medical Instruction, the Mount Sinai Hospital, Fifth Avenue at 100th Street, New York City 29.

◆ ◆

Stanford University
School of Medicine

William Walter Greulich, who received his doctor of philosophy degree at Stanford University in 1934, has been appointed professor of anatomy there, effective at the start of the summer quarter. Since 1940 Dr. Greulich has been professor of physical anthropology and anatomy and director of the Brush Foundation at Western Reserve University School of Medicine, Cleveland.

◆ ◆

University of Georgia
School of Medicine

On July 1 Dr. G. Lombard Kelly, who has been secretary of the Council on Medical Service and Public Relations of the American Medical Association under a six months leave granted by the University of Georgia School of Medicine, returned to the medical school as dean and professor of anatomy.

Vanderbilt University
School of Medicine

Dr. Walter E. Garrey, professor and head of the department of physiology, retired June 30 to become professor emeritus. Dr. Chas. E. King, associate professor, is in charge of the department until Dr. Garrey's successor is chosen.

◆ ◆

University of Pennsylvania
School of Medicine

On July 3 an oil portrait of Dr. William Pepper, dean, was unveiled at the Free Library of Philadelphia. Dr. Pepper was president of the board of trustees of the library from 1939 to 1943.

◆ ◆

Boston University
School of Medicine

Dr. Chester C. Keefer, professor of medicine and director of the Evans Memorial, has been appointed Medical Administrative Officer of the Committee on Medical Research.

◆ ◆

Ohio State University
College of Medicine

Rollo C. Baker, Ph.D., chairman on leave of the department of anatomy, will retire at the close of the academic year. He will retain his position as acting dean.

◆ ◆

Southwestern Medical College

New Appointments: Dr. Wm. F. Guerriero, from L. S. U., associate professor of obstetrics and gynecology. Dr. Francis Reichmann, research fellow of the Dazian Foundation, has joined the staff of the department of experimental medicine; Dr. Andres Goth, assistant professor of pharmacology. Mac F. Cahal, executive secretary of the Southwestern Medical Foundation, which owns the medical college, has resigned. Dr. Wm. H. Looney, professor of anatomy, has resigned.

State University of Iowa
College of Medicine

Dr. H. M. Hines, professor of physiology, succeeds Dr. J. T. McClintock as head of the department. Dr. Kendrick Hare, associate professor of anatomy, has been named associate professor of physiology. Dr. S. B. Barker, assistant professor of physiology, University of Tennessee College of Medicine, has joined the department of physiology as assistant professor. Dr. Ralph G. Janes of Wayne University has been appointed assistant professor of anatomy. Dr. James T. Bradbury, of the Division of Endrocrinology, U. S. Department of Agriculture, has been appointed research assistant professor in the department of obstetrics and gynecology. Dr. Willis M. Fowler, associate professor of theory and practice of medicine, was advanced to a full professorship. Dr. Mark L. Floyd, assistant professor of pediatrics, and Dr. Ronald Rooks, assistant professor of hygiene and preventive medicine, have been granted associate professorships. Dr. Robert L. Jackson has been named assistant professor of pediatrics and Dr. Kenneth MacDonald assistant professor of hygiene and preventive medicine.

◆ ◆

George Washington University
School of Medicine

Dr. Herbert P. Ramsey has resigned as executive officer of the department of obstetrics, but will remain on the faculty as clinical professor. Dr. Radford Brown, professor of obstetrics and gynecology, will be acting head of the department.

◆ ◆

Medical College of Virginia

Frances A. Hellebrandt, associate professor of medicine in charge of physical medicine at the University of Wisconsin Medical School, has joined the faculty of this school.

General News

Bureau of Medical Education

The New York Academy of Medicine has created a bureau of medical education to serve all physicians interested in furthering their medical education, but particularly the physicians returning from war and the increasing number of foreign physicians who arrive in New York for postgraduate instruction and training. The bureau, organized by and operated under the supervision of the committee on medical education of the New York Academy of Medicine, will render its services without charge. It plans to publish announcements of postgraduate medical courses conducted by the universities and the hospitals of New York City. Thirty-three of the leading hospitals have been invited to collaborate in this work. A group of advisers representing the special fields of medical practice has been appointed to supervise the work of the bureau.

◆ ◆

Health Education in Poliomyelitis

The National Foundation for Infantile Paralysis has set aside $50,000 for fellowships in health education. Under the program, which has been developed in cooperation with the U. S. Public Health Service, qualified men with certain selective service classifications, as well as qualified women, will begin training this fall. It is believed that trained personnel will be of great assistance in coordinating the community's resources of official and voluntary agencies. Candidates for these fellowships will be chosen by an advisory committee of the U. S. Public Health Service, and those accepted will be assigned to schools of public health at Yale University, University of Michigan and the University of North Carolina. The bachelor of science degree or its equivalent at a recognized college or university is an essential qualification for one of these fellowships leading to the master of science degree in public health. This postgraduate training will consist of nine months' academic work, followed by three months of supervised field experience. Women between the ages of 19 and 40 who have these educational qualifications and who are citizens of the United States are eligible. Men who are United States citizens over 30 years of age also may apply, and the War Manpower Commission has declared Selective Service registrants in 4F and 1AL classifications as eligible for health education fellowships. A fellowship in health education covers a stipend to the trainee of $100 monthly for twenty months, tuition and university fees to the school and expenses for field service. Applications are obtainable from the Office of the Surgeon General, U. S. Public Health Service, Washington (14), D. C. Applications must be accompanied by a transcript of college credits and a small photograph and must be in the Office of the Surgeon General not later than August 15.

◆ ◆

Brown University

The establishment of a Department of Medical Sciences is announced. This department will perform a number of important functions within the University and in the relationships of the University to the medical profession and hospitals of the community. Drs. Charles A. McDonald and Alex M. Burgess, physicians connected with the Division of University Health for some time, have been appointed professors of health and hygiene in this new department.

Through this department the University will assume a larger responsibility for the general education of its students in matters of health as a requisite of effective accomplishment in College and in after college years. It will approach this responsibility in the light of the needs which have been revealed by the war ex-

periences. Special attention will also be given to the orientation of students who are planning on professional study in the art and science of medicine.

The Department of Medical Sciences will also offer facilities for advanced study and research. This is designed in part to meet the needs and desires of recent graduates of medical schools whose postgraduate studies in certain specialized fields of medical sciences have been interrupted by war service. Opportunities for specialized study will also be available to other interested members of the medical profession. Brown University is also prepared to co-operate in the development of programs of postgraduate study and research for members of the resident staffs of the hospitals of the community.

◆ ◆

Medicolegal Conference and Seminar

The Massachusetts Medico-Legal Society, in conjunction with the medicolegal departments of Harvard, Boston University and Tufts Medical Schools, has arranged for an all day conference to be held at the Mallory Institute of Pathology, Boston City Hospital, on Wednesday, October 4, 1944. It will include lectures, demonstrations and informal discussions concerning many subjects in legal medicine, particularly stressing some of the more recent procedures. This meeting will be open to any registered physician, lawyer, police official, senior medical student or other medical investigator who may be interested and care to register. No limit in number has been made. There will be no fee for registration. While advance application is not essential, it would be helpful to those arranging the conference if notice of intention to attend be sent prior to October 1 to Dr. W. H. Watters, Department of Legal Medicine, Harvard Medical School, Boston.

The Harvard Medical School, Courses for Graduates, with the co-operation of the medical schools of Boston University and Tufts College offers a seminar in legal medicine to occupy the entire week of October 2-7, inclusive. It is planned particularly for medical examiners and coroners' physicians but will be open to any other suitable graduate of an approved medical school.

The course will be practical rather than theoretical and will consist of autopsy demonstrations, technique and interpretation of laboratory tests, study of the day-by-day cases of a medical examiner, round table conferences, and the many subjects now included in the widening field of legal medicine. In order that each participant may receive the maximum benefit, the enrollment has been limited to fifteen. For the Seminar the fee is $25. Application should be made on or before October 1 to Harvard Medical School, Courses for Graduates, 25 Shattuck Street, Boston 15, Massachusetts.

◆ ◆

Ochsner Foundation Offers Fellowships

The Alton Ochsner Medical Foundation, 3503 Prytania Street, New Orleans, announces the availability of a number of fellowships in various branches of surgery and medicine. Appointments will be made for a period of one year subject to renewal for a total of three years. The fellows will be encouraged to register in the Graduate School of Tulane University of Louisiana, where, if accepted, they can work toward an advanced degree. The Ochsner Foundation, of which Dr. Dean H. Echols, New Orleans, is medical director, was created in January. It is a nonprofit organization, chartered under the laws of the state of Louisiana for scientific, educational, charitable and literary purposes. Directors of the foundation are:

Mr. Theodore Brent, president of the Mississippi Shipping Company.

Dr. Edgar Burns, professor of clinical urology, Tulane University of Louisiana School of Medicine, New Orleans.

Dr. Guy A. Caldwell, professor of orthopedics at Tulane.

Dr. Francis E. Le Jeune, professor and head of the department of otolaryngology of the department of otolaryngology at Tulane.

Mr. J. Blanc Monroe, attorney.

Dr. Edward William Alton Ochsner, William Henderson professor of surgery and head of the department of surgery at Tulane.

Dr. Curtis H. Tyrone, New Orleans.

An announcement stated that, although a number of the trustees are on the faculty of the Tulane school of medicine, the Ochsner Foundation has no official connection with the school.

◆ ◆

Medical Expedition to the Liberated Netherlands

A group of prominent physicians recruited from American medical schools and hospitals will leave for Holland after that country's liberation, to give a series of four week postgraduate refresher courses in Dutch universities. This plan was announced by Dr. Herbert Loeb of Cambridge, Mass., former president of the Netherlands Dental Association at Amsterdam, who was instrumental in arranging for a similar postwar movement to bring dental care to the Netherlands. Nine medical specialists will make the transatlantic voyage to give the refresher courses which cover eight specialties and have been prepared in both the English and Dutch languages.

The idea originated with Dr. Herman de Jong of Duke University, formerly of the University of Amsterdam, where he specialized in neurology and psychiatry for the Dutch branch of the Rockefeller Foundation.

The Netherlands government will finance the traveling and other personal expenses of the American professors, who will, however, receive no extra or special compensation for their work in Holland. Because of German looting of Dutch medical school and hospital equipment, the physicians will take with them all material and instruments needed for laboratory and demonstration purposes.

In addition to Dr. de Jong, the "expedition" will include: Dr. Hanes, clinical medicine; Dr. Grimson, surgery; Dr. Smith, bacteriology and infectious diseases; Dr. Wilburt Davison, pediatrics, and Dr. Hamblen, obstetrics, gynecology and hormonology. These scholars are all of Duke University. Also covering clinical medicine will be Dr. Isadore Snapper, director of Department of Graduate Medical Education at Mount Sinai Hospital, New York City. He left the University of Amsterdam in 1937 to go to the Rockefeller Foundation at Peiping, China. He was captured by the Japanese and later sent to America as an exchange prisoner. Completing the roster are Dr. Van Slyke of the Rockefeller Institute of New York City, for biochemistry, and Dr. Marshall, of Johns Hopkins University, for physiology and pharmacology.

◆ ◆

Kellogg Foundation Creates Advisory Committees

The W. K. Kellogg Foundation, Battle Creek, Mich., has appointed advisory committees in a number of fields that comprise its major interests to evaluate the present programs and activities, review the major financial requests presented to the foundation and develop worth while activities in their respective fields that are consistent with the policies and philosophy of the foundation. Committees have been named in the fields of public health, hospitals, nursing, education and libraries. Plans are being made to name one in medicine and one in public health engineering. Among the advisory committees already named are the following:

Public Health Advisory Committee: Dr. Wilson G. Smillie, New York; Dr. Gregoire F. Amyot, Victoria, B. C., Canada; Dr. Henry F. Helmholz, Rochester, Minn.; Dr. Hugh R. Leavell, Louisville, Ky.

Hospital Advisory Committee: Mr. James A. Hamilton, New Haven, Conn.; Dr. Robin C. Buerki, Philadelphia; Lieut. Col. Basil C. MacLean, M. C.; Mr. John R. Mannix, Chicago.

Nursing Advisory Committee: Mrs. Leath Blaisdell Bryan, New York; Miss Minnie E. Pohe, Washington; Miss Ruth B. Freeman, Minneapolis; Miss Lucile Petry, Washington.

The committees will meet two to four times a year in Battle Creek and will be available to the officers of the foundation on a consultation basis throughout the year.

◆ ◆

University of Washington Proposed Medical School

The board of trustees of the Washington State Medical Association has appointed a committee to consider the possibility of establishing a medical school in Seattle as a part of the state university. If the regents of the university are agreeable to the suggestion, it is believed that the two groups will jointly initiate legislation for the appropriation of funds at the next meeting of the legislature in January, 1945.

◆ ◆

Changes in Rockefeller Foundation

Dr. Hugh H. Smith, a staff member of the International Health Division of the Rockefeller Foundation since 1930, has been appointed regional director of the United States, Canada and Mexico. Dr. Smith succeeds Dr. John A. Ferrell, who recently became medical director of the John and Mary R. Markle Foundation. Dr. Smith on September 1 will also become assistant director of the International Health Division. Dr. George K. Strode, who has been acting director of the International Health Division since June 1, will become director on September 1. At the same time Dr. Andrew J. Warren, assistant director in the division, will become associate director.

◆ ◆

Squibb Institute for Medical Research

Dr. Arthur P. Richardson, professor and head of the department of pharmacology in the University of Tennessee, Memphis, has been appointed head of the division of pharmacology in the Squibb Institute.

Conference of Professors of Preventive Medicine

The second annual meeting of this group will be held in New York City, October 2. Dr. W. G. Smillie, of Cornell University Medical School, is the president. Dr. M. E. Barnes, of the State University of Iowa, is chairman of the program committee. Professor Leland W. Parr, of George Washington University School of Medicine, is secretary.

◆ ◆

American Hospital Association

Dr. A. C. Bachmeyer, director of the University of Chicago Clinics, was appointed to conduct a two year survey of America's hospital system at the initial meeting of the Commission on Hospital Care in Philadelphia August 1. The Commission was organized on the request of members of the American Hospital Association for an independent, unbiased study to serve as a basis for plans for future hospital facilities and the extension of those already in service.

In his capacity as permanent director of study, Dr. Bachmeyer will make a survey of hospital facilities in three states—California, Michigan, and one in the South—to determine the health needs of every segment of the population, and to investigate the potentialities for an even wider distribution of hospital service.

On the basis of these studies, a nationwide plan looking toward greater coordination among hospitals will be developed, aimed at extending hospital care of the sick and injured equally to all—the farmer, the laborer, the urban dweller and those groups requiring specialized attention for mental and incurable diseases.

Dr. Thomas S. Gates, president of the University of Pennsylvania, is chairman of the Commission, which has been financed by a fund of $105,000 contributed by the W. K. Kellogg Foundation, the Commonwealth Fund of New York, and the National Foundation for Infantile Paralysis.

Book News

Urological Surgery

By Austin I. Dodson, M.D., Professor of Urology, Medical College of Virginia, and Seven Contributors. The C. V. Mosby Company, St. Louis. 1944. Price, $10.

The purpose of this book is to present and discuss surgical problems arising in everyday urological practice. It is not a complete treatise of the diseases of the genitourinary organs. It is an aid in clinical work and a surgical supplement to the usual textbooks. The book is to a great extent an expression of the author's personal experience. He has done well.

◆ ◆

Heart Disease

By Paul Dudley White, M.D. Lecturer in Medicine, Harvard Medical School. Ed. 3. The Macmillan Company, New York. 1944. Price, $9.

The comprehensive and authoritative nature of Dr. White's treatment of the pathology, diagnosis and treatment of heart disease, the unusual clarity of presentation, and the care with which he has summarized the *known* and the *unknown* in controversial matters, combine to make this book one of outstanding usefulness.

◆ ◆

Lippincott's Quick Reference Book for Medicine and Surgery

By George E. Rehberger, M.D. Ed. 12. J. B. Lippincott Company, Philadelphia. 1944. Price, $15.

This book consists of eleven parts, including the whole field of practical medicine, except psychiatry. Each disease or disorder is presented alphabetically. Part 11 presents an alphabetical list of all the drugs mentioned in the body of the book and all that should be known about each drug. It is encyclopedic and well illustrated.

◆ ◆

Simplified Diabetic Management

By Joseph T. Beardwood, Jr., M.D., Associate Professor of Medicine, and Herbert T. Kelly, M.D., Associate in Medicine, Graduate School of Medicine, University of Pennsylvania. Ed. 4. J. B. Lippincott Company, Philadelphia. 1944. Price, $1.50.

This little book makes easy the prescription of a diet to diabetics and have the patient understand what it is all about. The various food values, recipes and suggested menus are conveniently grouped in one chapter.

Rebel Without a Cause: The Hypnoanalysis of a Criminal Psychopath

By Robert M. Lindner, Ph.D., Psychologist U. S. Penitentiary, Lewisburg, Pa. Introduction by Sheldon Gleuck, Ph.D., Professor of Criminal Law and Criminology, Harvard Law School, and Eleanor T. Glueck, Ed.D., Research Criminologist, Harvard Law School. Grune & Stratton, New York. 1944. Price, $4.

By means of a novel telescoped technique utilizing the methods of psychoanalysis and hypnosis, the author uncovers the crucial episodes and the basic characterologic factors in the life of a youthful criminal, and reconstructs the mental history of a baffling abnormal personality from earliest infancy, through a perverted, lawbreaking boyhood, to the young manhood phase in a penitentiary environment.

The subject unfolds his own story, and in his deepest revelations relives the experiences that dynamically shaped his aberrant being.

◆ ◆

An Atlas of Anatomy

By J. C. Boileau Grant, M.C., M.B., Ch.B., F.R.C.S. (Edin.), Professor of Anatomy, University of Toronto. By Regions: Upper Limb, Abdomen, Perineum, Pelvis, Lower Limb, Vertebrae and Vertebral Column, Thorax, Head and Neck. The Williams & Wilkins Company, Baltimore. 1943. Price, $10.

Dr. Grant has added another specimen to his previously published fine atlases of anatomy. Prominent features are: Meticulous preparation of specimens; accuracy, established by photographic means—every plate being a work of art. Many of the plates are in color, three, four or more. They are labeled clearly. Accompanying short demonstrations emphasize points of significance. This atlas will prove to be a great aid in learning—not memorizing—anatomy, which is of prime importance to the student as well as to the practitioner of medicine. Incidentally, this atlas is a work of art.

◆ ◆

The Art of Anesthesia

By Paluel J. Flagg, M.D., Chairman of Committee on Asphyxia, American Medical Association. Ed. 7. J. B. Lippincott Company, Philadelphia. 1944. Price, $6.

An authoritative and clear exposition of the art of anesthesia by a master. There is a great need for this book.

Bailey's Textbook of Histology

Revised by Philip E. Smith, Ph.D., Professor of Anatomy, and Wilfred M. Copenhaver, Ph.D., Associate Professor of Anatomy, College of Physicians and Surgeons, Columbia University; with the assistance of Aura E. Severinghaus, Ph.D., Associate Professor of Anatomy, College of Physicians and Surgeons, Columbia University, and Charles M. Goss, M.D., Professor of Anatomy, University of Alabama School of Medicine. Ed. 11. The Williams & Wilkins Company, Baltimore. 1944. Price, $6.

Revised; new illustrations added, three in color. This book meets the needs of the medical student because it emphasizes the application of histology to practical medicine. It justifies the place of histology in the medical curriculum. There is a reason for this being a part of practical medicine.

✦ ✦

Fundamentals of Internal Medicine

By Wallace M. Yater, M.D., Professor and Director of the Department of Medicine, Georgetown University School of Medicine. Ed. 2. D. Appleton-Century Company, New York. 1944. Price, $10.

A presentation of basic facts in a simple, understandable manner. The book was designed for the medical students and the purpose of the author reached fulfillment. It is a fine medical student text.

The Management of Neurosyphilis

By Bernhard Dattner, M.D., Associate Clinical Professor of Neurology, New York University College of Medicine, with the collaboration of Evan W. Thomas, M.D., Associate Professor of Medicine and Assistant Professor of Dermatology and Syphilology, Gertrude Wexler, M.D., Instructor in Dermatology and Syphilology, N. Y. U. Foreword by Joseph Earle Moore, M.D., Associate Professor of Medicine and Adjunct Professor of Public Health Administration, Johns Hopkins University. Grune & Stratton, New York. 1944. Price, $5.50.

A practical manual of diagnostic and therapeutic procedures; a world wide survey of all methods used in the management of syphilis of the central nervous system; a textbook of fundamentals and an interpretation of present day standpoints and lines of advance. Illustrated. Comprehensive bibliography.

✦ ✦

Practical Methods of Biochemistry

By Frederick C. Koch, Frank P. Hixon Distinguished Service Professor Emeritus of Biochemistry, University of Chicago, and Martin E. Hanks, Associate Professor of Biochemistry, University of Chicago. Ed. 4. The Williams & Wilkins Company, Baltimore. 1944. Price, $2.25.

Laboratory manual. Excellent.

NEW WORK *JUST READY*

SURGICAL DISORDERS OF THE CHEST

Diagnosis and Treatment

By J. K. DONALDSON, M.D., F.A.C.S.
Major, M.C., Army of the United States; Diplomate American Board of Surgery; Associate Professor of Surgery in Charge of Thoracic Surgery, University of Arkansas School of Medicine, etc.

Octavo, 364 pages, illustrated with 127 engravings. Cloth, $6.50.

This new work enables physicians and surgeons to develop the new concepts of chest disorders in the light of vastly improved therapeutic possibilities. It is on the general practitioner that the patient depends for diagnosis and advice. Early diagnosis and proper recommendations are of the first importance.

Some discussion pertaining specifically to war injuries has been included. This work should so increase the diagnostic efficiency of the general practitioner that the patient will be brought to the chest surgeon's attention at the earliest possible moment. It will assist him to evaluate the practicability of major procedures.

Washington Square **LEA & FEBIGER** Philadelphia 6, Pa.